ENGINEERING NEWS-RECORD

Outlet works of Clearwater flood control project in Missouri to be completed this month.

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The Week In Engineering and Construction

ENGINEERING NEWS-RECORD • NOVEMBER 27, 1941

Defense highway bill signed by the President

In signing the act, President Roosevelt asks Congress to repeal authorizations for the strategic highway network. Reduction of road work seen.

The defense highway authorization bill became law last week when the President grudgingly affixed his signature to it. In letters to the chairmen of the House and Senate road committees he explained that the need for access roads and flight strips is so urgent that he "felt constrained" to sign the measure. He expressed his disapproval, however, of provisions authorizing expenditures for roads on the strategic network, changing the basis of federal-aid contribution to projects on the network to 75-25, and permitting use of federal-aid funds for parking lots.

Surprisingly, the President also disapproved of the provisions for financing advance planning of express highways, despite his often-expressed desire for the formation of a reservoir of post-war public works.

The President expressed his "earnest hope" that Congress will promptly repeal the offensive sections.

A day earlier the President, commenting on the bill at his press conference, reiterated his often expressed opposition to the federal-aid procedure by which sums authorized by Congress are distributed to the states according to a mandatory formula and then subsequently appropriated for as obligations of the federal government. He said he thinks it is probably unconstitutional for one Congress to bind another in this manner. He said he thinks the money ought to be spent instead where it is needed most on specific defense roads.

Possible changes in federal aid

A few weeks ago, Secretary of the Treasury Morgenthau, who frequently speaks for the President, urged Congress to cancel the unallocated highway authorizations. This, together with the President's remarks last week, has aroused an expectation among many in Washington who are well-informed on road matters that some new move to change the basis of federal aid is in the offing.

It will be remembered that in 1938 the President withheld the formal allocations of authorized road funds, asked the states not to obligate the money, and urged Congress to amend the federal-aid act to eliminate advance authorizations. On that occasion, Congress refused to act, and the attempt failed. Now, however, the President has available a new and widely popular argument in the need for economy in non-defense expenditures. He can contend, too, that with other forms of construction restricted it is illogical to continue road work.

What form the new attack will take is problematical. In view of the previous failure it is unlikely that President Roosevelt will try to hold up the December allocations; Congress after all specifically directs that the allocations be made. He might however express publicly his opinion that the authorizations are not a binding commitment and warn the states that he does not expect to submit budget estimates to make them good.

Another approach might be through the priority system. At present, under the road priority plan, A ratings are assigned to all highway projects involving

Michigan builds wide bridge on U. S. Route 31

As part of a relocation project on U. S. Highway 31 to bypass South Haven, Mich., the state highway department has completed an unusually wide bridge, 75 ft. 2 in., with two 33-ft. roadways separated by a 4-ft. median strip, and an 18-in. curb walk on each side. The bridge is 220 ft. long. It is said to be the widest bridge ever built in Michigan.

A transition curve, narrowing the median strip from the 28 ft. planned for the highway to the 4 ft. on the bridge, will be provided. Work on the highway proper is expected to be completed early next year.

The substructure of the bridge, supported on treated timber piles, consists of two gravity type concrete abutments and three concrete piers. The superstructure consists of four 55-ft. rolled beam spans.

Walter Toebe & Co., Munising, Mich., was the contractor.

federal money. But this plan could readily be cancelled and road projects be brought under the general SPAB policy on construction—so that each would have to be justified individually on its defense value. Already, it is understood, PRA is holding up applications for ratings except on access and stragetic roads and bridges on the federal aid system.

Money to be asked soon

An early start is expected on the access-road and flight-strip portions of the emergency road program. The President will ask Congress to appropriate the money within a few days. He may possibly ask for appropriation of the unallocated half of the strategic network money at the same time.

The Public Roads Administration now has lined up more access road projects than can be built with the $150.000.000 to be available, so work can start at once. In the main, projects will be handled through the state highway departments, although no state money is involved in the program. In a few cases—perhaps in Alaska, on public land, and in any states that might prove uncooperative—PRA may itself let contracts.

The flight strip program, for which $10.000,000 is authorized, is not quite so far advanced. The Army has not yet furnished PRA with definite locations for projects, but machinery for joint study is being worked out.

New federal-aid ratio

The new 75-25 ratio of federal aid supplies, theoretically, to all projects approved since last April. It is not expected, however, that it will be applied to many projects already set up. With limited amounts of federal aid available, a state has little to gain, once it has allotted its matching money to a job, by switching to the new basis, since this would merely reduce the total money available.

Parking work limited

Also unlikely to have much early effect is the permission for use of federal aid on parking lots. Before this can be done, the state must agree to forbid parking on the adjacent highway. No highway department now has the authority to forbid parking within municipalities, where the chief problem exists. Until state legislatures act, application of the new clause is likely to be limited to a few situations in the suburbs of cities.

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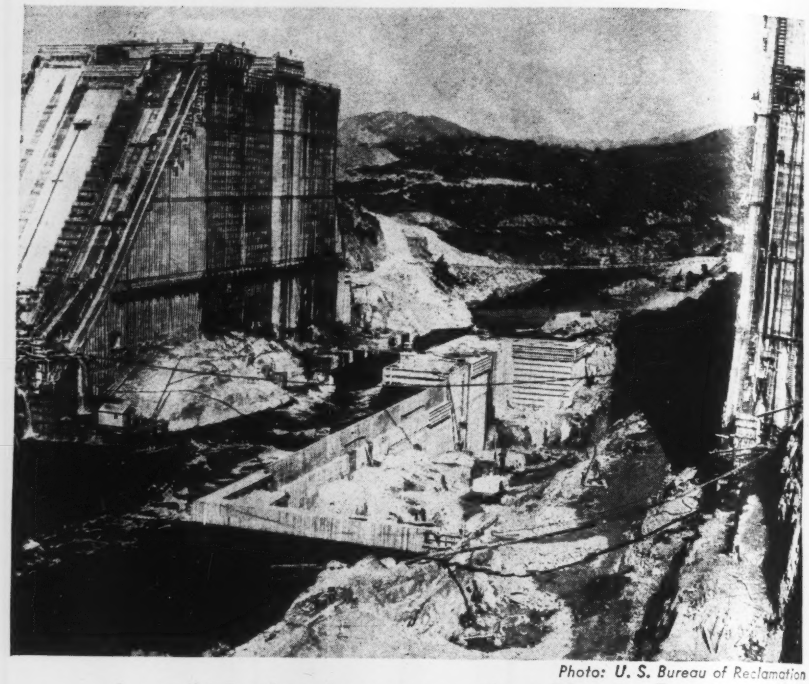

Photo: U. S. Bureau of Reclamation

Lowest bedrock uncovered at Shasta Dam

Final excavation in the channel of the Sacramento River indicates that the maximum height of Shasta Dam from bedrock to the roadway on top will be 602 ft. This height is indicated by an announcement of Ralph Lowry, construction engineer, stating that sound bedrock was reached about 100 ft. below the former river bed, at El. 475.5. First concrete at this low point was placed on Nov. 13. Yardage placed in the dam up to that time was 2,210,000 cu.yd., a little over one-third the 6,000,000 cu.yd. estimated to represent the total. Length of the dam will be about 3,500 ft.

On the east side (right) final excavation and rock clean-up are being rushed in the old diversion channel preparatory to placing foundation concrete in this area before seasonal high water temporarily halts construction in this section.

The general contract for construction of Shasta Dam for the U. S. Bureau of Reclamation is held by Pacific Constructors, Inc., and is now rated as 62 percent complete.

Key West to have fresh water aqueduct

Last obstacle standing in the way of construction of the Key West aqueduct was removed last week when the Florida Supreme Court approved the issuance of $1,750,000 in bonds by the Florida Keys Aqueduct Commission. The United States Navy will furnish $2,250,000 toward the cost of the project, and the commission $1,125,000.

The aqueduct will extend from the mainland near Miami, Fla. to the tip of the Key West peninsula, a distance of 134 miles. The pipe line will be 18 in. in diameter and will carry a minimum of 3,000,000 gpd, two-thirds of the water to be used by the Navy and one-third for the Key West civilian population. It is expected that construction will begin immediately and the project completed by early next year.

The total project will be constructed at an estimated cost of $3,000,000 including the pumping stations. Williams Bros. of Tulsa, Okla. holds the contract for laying the pipe on a bid of $1,000,000. Pipe was furnished by Youngstown Sheet & Tube Co., Youngstown, Ohio, and American Rolling Mill Co., at a cost of $2.000.000. Parsons, Klapp, Brinkerhoff & Douglas, and E. T. Killam, New York, N. Y. are consulting engineers.

San Francisco-Oakland Bay Bridge five years old

Completing five years of operation this month, the San Francisco-Oakland Bay Bridge has accommodated 190.000.000 passenger crossings or 63.819.025 vehicular trips. Since the bridge was opened to the public on Nov. 12, 1936, toll revenues have amounted to $25.000.000.

The bonded indebtedness of the 4½-mile span when completed was $73.000.000, and this sum has now been reduced to $66,000,000.

Increasing use of the structure is indicated by the following record: total crossings in 1937, 9,104.765; in 1938, 8,621,196; in 1939, 10.963.432, and 15.264,404 in 1940. As of Nov. 12, a total of 18,500,000 vehicle crossings have been made so far this year.

In spite of the heavy traffic over the bridge the saturation point has not yet been reached, the bridge commission believes that 20 percent more vehicles per day or nearly 80,000, compared to the present 58,365, could be handled.

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St. Lawrence and Florida canals in new rivers and harbors bill

House committee reports out a bill authorizing nearly one billion dollars of work but proposes that most of it be held in reserve for construction in post-war period.

Authorization of just under a billion dollars worth of river and harbor projects was approved last week by the House Committee on rivers and harbors. The measure includes authorization for the controversial St. Lawrence power and seaway project at a cost of $227,056,000, including $93,375,000 to be repaid by New York State. The bill also would authorize construction of the Florida ship canal at a cost of $197,921,000. Other large projects included in the measure are: the Tennessee-Tombigee waterway, $66,000,000; first section of the $207,000,000 Beaver-Mahoning Canal. $48,179,00; Umatilla Dam on the Columbia River, $49,470,000.

Chairman Mansfield of the Rivers and Harbors Committee says the bill will be brought before Congress in January. It is reported, however, that the administration is afraid that it may not yet have the votes to pass the St. Lawrence authorization and will hold up on the bill until increased war tension may build up press behind it.

The bill is really two measures. On some 36 projects costing $310,401,100, the committee has received evidence that they are of defense importance, and it is contemplated that they be carried out immediately. The rest of the authorizations are intended to build up a reservoir of post-war public works. Included among the defense projects are the St. Lawrence power and navigation project and the Florida canal, with initial construction of a barge channel during the course of the ship canal job. Among the larger of the projects for which a defense justification is claimed are the following: Connecticut River between Hartford and Holyoke, $12,344,000; 40-ft. channel in East River, N. Y., $36,309,000; Clark Hill reservoir, Savannah River, Ga., $28,000,000; Mississippi between the Ohio and Missouri, $10,290,000; new lock at Sault Ste. Marie, Mich., $8,000,000.

Not recommended for immediate undertaking, but included in the bill, are several comprehensive river plans: For the Alabama and Coosa rivers, $60,000,000; for the Trinity River, $23,000,000; and for the Columbia and Snake rivers, including Umatilla Dam, $80,000,000.

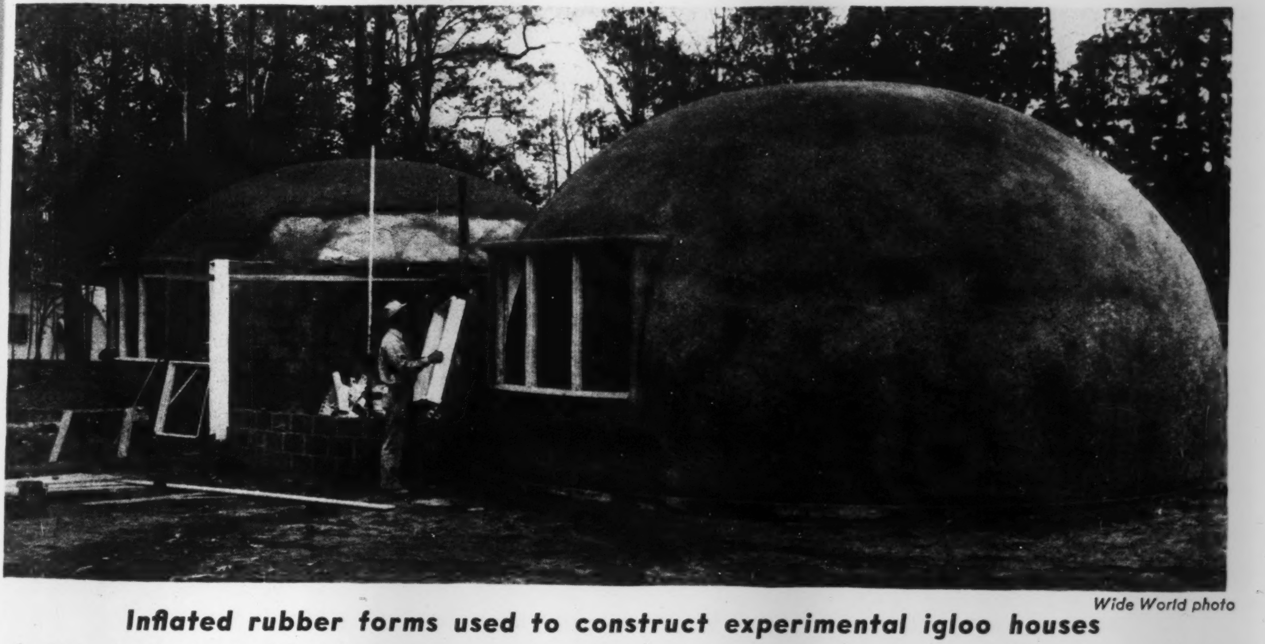
Chief legislative change in the bill would authorize the Chief of Engineers, at his own discretion, to install power generating facilities when he thought it desirable in any navigation project hitherto or hereafter authorized.

Three minority reports were filed on the bill. An eight-man report recommended elimination of the St. Lawrence authorization; five urged that the Beaver-Mahoning Canal be dropped, and a slightly different group of eight recommended that the bill not be passed.

• • •

Sinclair to construct 400-mile pipeline

Announcement has been made by the Sinclair Oil Co., through its New York offices, that a 400-mile gasoline and oil pipeline will be constructed from its refineries at Marcus Hook, near Philadelphia, to Pittsburgh, Pa. Construction of the Pennsylvania section is expected to get under way within the next two weeks; survey work has already started on an auxiliary branch line which will extend from a point 15 miles north of Lancaster, Pa. to Baltimore, Md.



Wide World photo

Inflated rubber forms used to construct experimental igloo houses

A group of ten experimental low-cost houses of novel design are being erected in Fairfax County, Va., near Washington, D. C. The houses are being built by Defense Homes Corp., a subsidiary of the RFC.

As novel in construction as they are in design, the method of construction consists of an ordinary foundation, without basement, over which is placed an inflated rubber form, against which, in proper position, are placed the frames for doors and windows. An inch of concrete is then sprayed on reinforcing steel mesh over the form. A few hours later an inch of insulation material is applied, followed by a 2-in. final layer of concrete. The rubber form is then deflated and removed. This method of construction makes possible the elimination of plaster on the inside and paint for the outside.

The house pictured above under construction has two bedrooms, a living room, kitchen, bath, storage room, and heating room. The houses are said to be fireproof and resistant to bomb splinters.

Clearwater Dam outlet works completed

Construction of the outlet works for the $8,000,000 Clearwater flood control project on Black River in southeast Missouri, which is being built by the Little Rock District, U. S. Engineer Department, will be completed late this month. Work will rapidly get underway on the second phase of the project or construction of the rolled-fill earth embankment and excavation for the spillway. Site of the project is in Wayne County 43 miles north of the Arkansas-Missouri state line, 32 miles northwest of Popular Bluff, Mo., and about 256 miles above the mouth of the Black River.

The contract for the outlet works was awarded May 2, 1940, to the United Construction Co., Winona, Minn., and for the dam and spillway excavation June 10, 1941, to Mittry Brothers Construction Co., Los Angeles, Calif. The spillway will be built under a subsequent contract.

The outlet works consist of a 122-ft. long forebay, a 67-ft. wide control tower with an operating house, a curved tunnel conduit, and a 220-ft. long stilling basin. Total length of the outlet works, including the transitions, is 1,176 ft. The 23-ft.-diameter tunnel, which is lined with reinforced concrete, is 1,097 ft. long, while one transition section is 45 ft. long and the other 35 ft. A service bridge will connect the top of the dam and the gate tower.

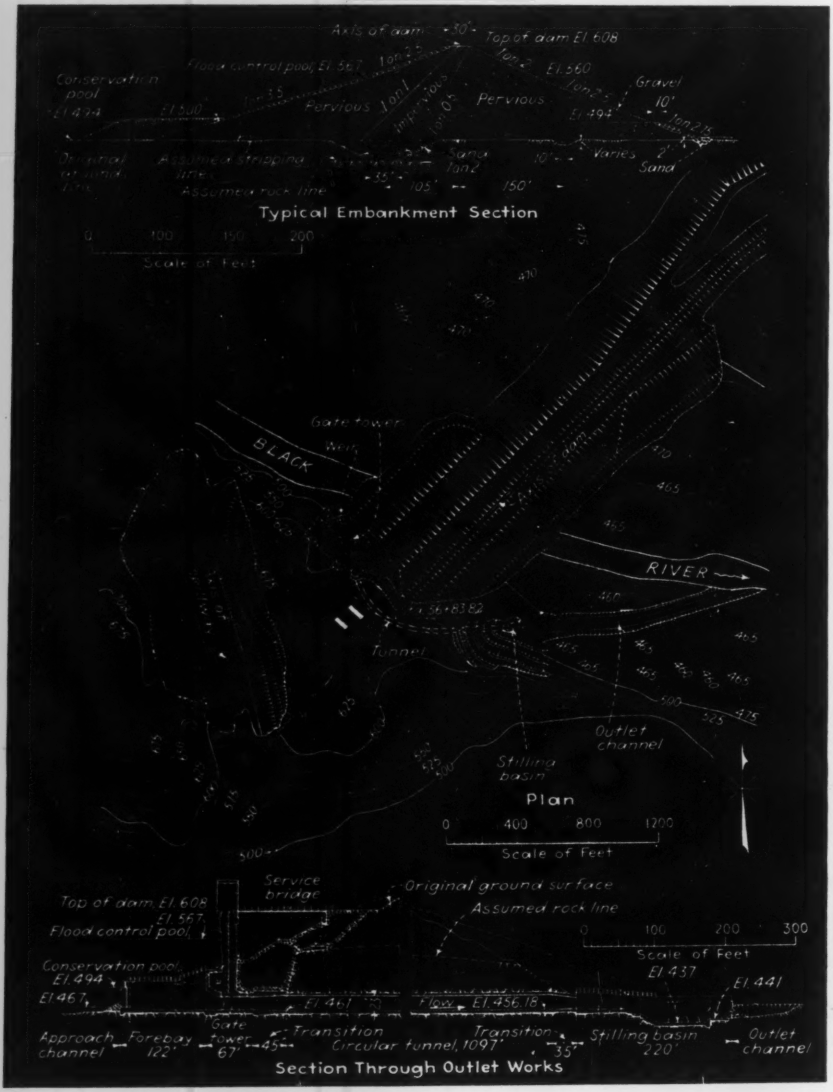
Clearwater Dam, which will have a crest length of approximately 4,200 ft., will be 154 ft. high, and contain more than 5,000,000 cu.yd. of earth. Work is now under way on the cut-off trench and the smaller seepage trench, preparatory to placing the impervious core of the dam. As shown by the accompanying drawing, the impervious section occupies a slanting position with its upstream side on a 1:1 slope, and the downstream slope 0.5:1. Top of the dam, which is at Elev. 608, will be 30 ft. wide.

A saddle spillway of concrete will be located in the right abutment, a short distance above the outlet works and dam. It will be 190 ft. wide and will provide for discharge of overflow into the river channel about a mile downstream from the dam.

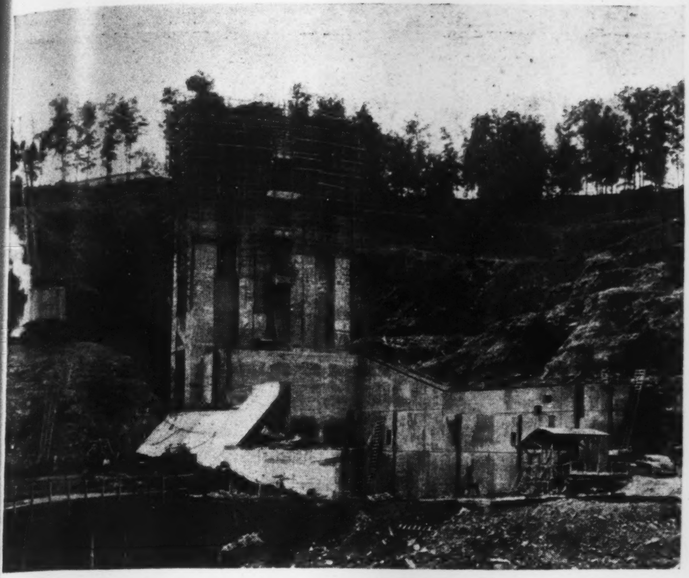
In the summer of 1944 the entire Clearwater project is expected to be complete to provide flood protection downstream to the vicinity of Poplar Bluff, Mo. Drainage from an area of 885 sq. mi. will be controlled by the dam. The reservoir to be formed will have a total storage capacity of 413,000 acre-feet, and there will be a permanent pool of 1,650 acres, extending six miles upstream and containing 22,000 acre-feet of water for conservation and recreation purposes.

Personnel in charge

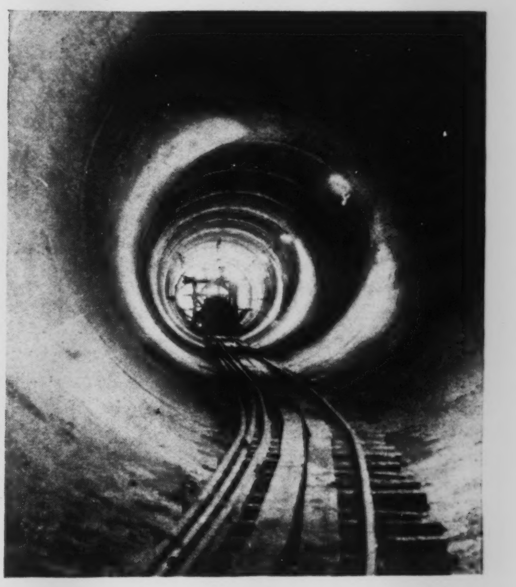
Lt. Col. T. F. Kern, Corps of Engineers, is the Little Rock district engineer, and Major J. R. Crume, Jr., Corps of Engineers, is executive assistant and chief of the engineering division of the district. During the illness of Harold E. Murray, Leon M. White is acting resident engineer. Walter C. Groshong is general superintendent for the United Construction Co., while O. K. Mittry, president, is directly in charge of operations for the Mittry Brothers firm.


Axis of dam
30'
Top of dam El. 608
Flood control pool, El. 567
1 on 2.5
1 on 2
El. 560
Conservation pool El. 494
El. 500
1 on 3.5
Pervious
1 on 1
Impervious
1 on 0.5
Pervious
1 on 2.5
Gravel
10'
El. 494
1 on 2.15
Original ground line
Assumed stripping line
35'
Sand 1 on 2
10'
Varies
2'
Sand
Assumed rock line
105'
150'
Typical Embankment Section
0
100
150
200
Scale of Feet
Gate tower
Weir
BLACK
RIVER
Tunnel
Stilling basin
Outlet channel
Plan
0
400
800
1200
Scale of Feet
Service bridge
Original ground surface
Assumed rock line
Top of dam, El. 608
El. 567
Flood control pool
Conservation pool
El. 494
El. 467
El. 461
Flow
El. 456.18
0
100
200
300
Scale of Feet
El. 437
El. 441
Approach channel
Forebay 122'
Gate tower 67'
45'
Transition
Circular tunnel, 1097'
Transition
35'
Stilling basin 220'
Outlet channel
Section Through Outlet Works

CLEARWATER DAM, an earthfill structure on the Black River in Missouri for flood control, will be 4,200 ft. long and 154 ft. high. It will control runoff from 885 sq.mi. by creating a 413,000 acre-foot reservoir. There will be a permanent pool of 1,650 acres, extending six miles upstream and containing 22,000 acre-feet of water for conservation and recreation purposes. Note the cross-section through the outlet works and the typical embankment section.

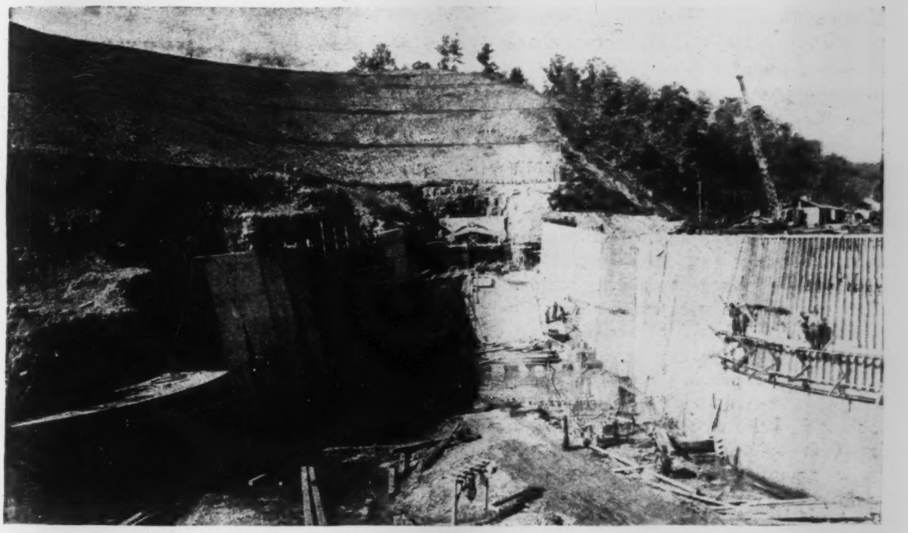


CONSTRUCTION of the forebay and the control tower was still under way when this view was taken. Location and dimensions are shown in drawing on opposite page.



A 23-FT. diameter tunnel 1,097 ft. long connects the control tower and the outlet opening.

LOOKING UPSTREAM at the outlet opening and the stilling basin during latter stage of this construction.



SITE of the dam with excavation for the cut-off trench underway in the right foreground and for the seepage trench at the left. Across the Black River valley the control tower and the stilling basin of the outlet works are being completed.

WASHINGTON HIGHLIGHTS

Transfer of all Army construction to the Corps of Engineers, eliminating the construction division of the Quartermaster Corps, has received final Congressional approval and is now before the President for signature. There is no doubt that he will sign.

Economic Justification of the Great Plains water conservation projects—the so-called "Wheeler-Case projects" — would be made easier under a bill which has been reported by the House irrigation committee. At present these projects may be undertaken if the anticipated water revenues equal the cost less whatever contributions have been made from relief funds. Under the pending measure, an allocation for flood control benefits could also be deducted in determining the economic justification. At the moment the question is rather academic, since the Great Plains projects have been nearly eliminated from the Reclamation program (see p. 7).

• • •

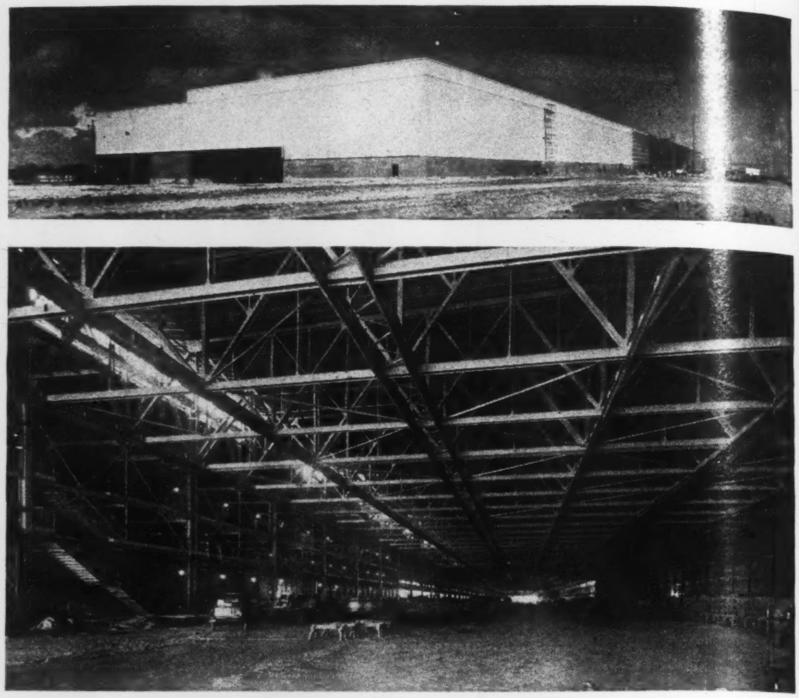
Government takes over Grand River Dam

To prevent the "financial and management difficulties" of the Grand River Dam Authority from interfering with defense use of power from the dam, the President has ordered the Federal Works Administrator to take possession of the $25,000,000 project in Oklahoma. The action was taken under Section 16 of the Federal Power Act, which authorizes the President to seize any licensed hydro project when it is needed for the national safety. The President's order stated that, when the need is passed, the project will be returned to the authority.

Basic difficulty of the project, which was entirely financed by a PWA loan and grant, is that GRDA was set up by an Oklahoma state administration which has since been replaced by a governor hostile to the authority.

Consequently, the GRDA has been unable to obtain from the state legislature authority to issue bonds to finance transmission lines which would permit sale of its power on favorable terms. The authority is in default on its PWA loan.

Some observers think that one motive for the seizure may be a desire to facilitate eventual absorption of the project by an Arkansas Valley Authority, which is one of a group of regional authorities now being pushed by the administration. Desire to avoid discrediting public power through the financial failure of this project may also have had its influence.



Steel framework complete on Fort Worth Bomber Plant

Ceremonies marking completion of the 22,000-ton structural steel framework of Consolidated Aircraft's new bomber assembly plant at Fort Worth, Tex., were held last week. The work of inclosing the structure with fiber glass, which is being used to provide insulation and acoustical control, together with ribbed steel facing panels, is well advanced. The illustration above shows the first 600 ft. of this work complete, except for an expansion joint (where the single section of scaffold can be seen at a point 200 ft. from the south end). Masonry walls with special reinforcing extend around the base of the building to a height of 12 ft.

The Fort Worth plant, 4,000 x 320 ft., and 65 ft. high, is one of the largest industrial buildings ever built (ENR, Oct. 23, Vol. p. 601). There are two bays 120 and 200 ft. wide, with 32,000,000 cu.ft. of clear working space beneaath the 200-ft. trusses that span the area (shown in the lower illustration). These bays are served by an interconnecting network of monorails, which also connect with the 120-ft. side aisle and mezzanine on the left. The plant has a total of 2,000,000 sq.ft. of floor space.

At Tulsa, Okla., a twin plant is being erected. Both plants were designed by the Austin Co. Cleveland, Ohio, and built under the direction of U. S. Army Engineers. Albert F. Low, Austin Company vice president and chief engineer is project manager at Forth Worth, and N. R. Crater is superintendent. Capt. J. H. Anderson is resident engineer for the Army at Fort Worth. The Tulsa plant will be operated by Douglas Aircraft Co., and general contractor on this job is Manhattan-Long, a combination of the Manhattan Construction Co., Muskogee Okla., and the Long Construction Co., Tulsa.

Bids on Bluestone Dam to be opened next month

Plans and specifications have been completed for Bluestone Dam, which is to be constructed about one half mile above the junction of the New and Greenbrier rivers and about two and one-half miles above Hinton, W. Va. Call for bids is expected about Dec. 15.

The dam will be a concrete structure of gravity type with a crest length of 2,060 ft. and a maximum height of about 180 ft. above foundation rock. The spillway will have a crest length of 790 ft. An auxiliary dam, 25 ft. high and 790 ft. long will be built downstream to provide a stilling basin for the spillway. A power house will be constructed under a separate contract.

About 1,000,000 bbl. of cement will be required; 8,065,000 lb. of reinforcement, structural and miscellaneous steel; 16,500 lb. of bronze; 1,300 lb. of corrosion resisting bolts; 196,000 lb. of rails for the gantry crane and push car; 50,000 lb. of copper water stops; 200,000 lb. of electrical conduit. The government will furnish all cement required for construction, also sluice gates, needle valves, crest gates, and emergency bulkheads for the sluices, all pressure and sump pumps and other equipment for installation by the contractor. The project will be carried out under the direction of the U. S. Engineer Department.

Money for reclamation projects cut 15 percent due to defense needs

Funds for irrigation reduced as war needs shift emphasis in Bureau of Reclamation work to power production for industrial use.

The Bureau of Reclamation, which has been gradually feeling the effects of the defense program in recent months, had them really driven home last week when a substantial portion of its $98,000,000 appropriations for fiscal 1942 were impounded—withdrawn from use by executive action as part of the President's program of reducing non-defense expenditures. Although no official announcement was made, it is understood that the cut amounted to about $15,000,000. In addition, Reclamation has been directed not to make use of some $8,000,000 in contract authorizations not yet covered by appropriations. The bureau will thus have available funds to permit a rate of expenditure about equivalent to that of fiscal 1941, when just under $80,000,000 was spent.

The cut will be rather widely distributed among the non-power phases of the reclamation program. Biggest single chunk, it is learned, will come out of the Great Plains water conservation program which will be nearly eliminated. The Valley Gravity Canal and Storage project in Texas, which was to have been started this year, will also account for a sizable portion of the cut. It is believed that something like a million each will be cut from the non-power work on Grand Coulee and Central Valley. These changes will not effect contractors much, since construction schedules were drawn in anticipation that something like this would happen.

War shifts emphasis

Although the recent program to increase agricultural output may eventually reverse the trend, to date the war has tended to convert the Reclamation Bureau from an irrigation agency developing by-product power to a hydro-power agency which does some irrigation when it can.

On the one hand, power programs have been steadily accelerated through supplemental appropriations. And on the other hand, the non-power projects have been running into constantly increasing difficulties with material procurement and with unwillingness of contractors to bid on jobs without priority ratings. The power projects in general have high priority ratings, in the A-1 range, but no ratings are being granted for other projects.

Biggest material headache for the bureau has been on reinforcing steel. There is considerable question, in fact, whether it will be possible to finish Friant Dam, scheduled for completion this year. Some difficulty is also being experienced in getting gates, control structures, and the like.

Most recent example of trouble with bids was at the Colorado-Big Thompson project. An attempt to obtain reasonable bids on Granby Dam and its outlet tunnel was unsuccessful (*ENR*, Nov. 13, p. 6). It was only possible to obtain satisfactory bids on the tunnel alone on a second opening; bids on the dam were again rejected, and the dam may well be deferred until after the war. This project has no priority rating.

Even failing this, however, much work on canals and distribution ditches can be undertaken without using critical materials. The bureau, too, can abandon its concentration on concrete dams and go in for earth and rockfill structures; this is already being done on Davis Dam of the new Bullshead project.

The larger projects

Extent of the present concentration on power projects is well illustrated by the programs for five larger projects which, together, account for more than 80 percent of the available money this year.

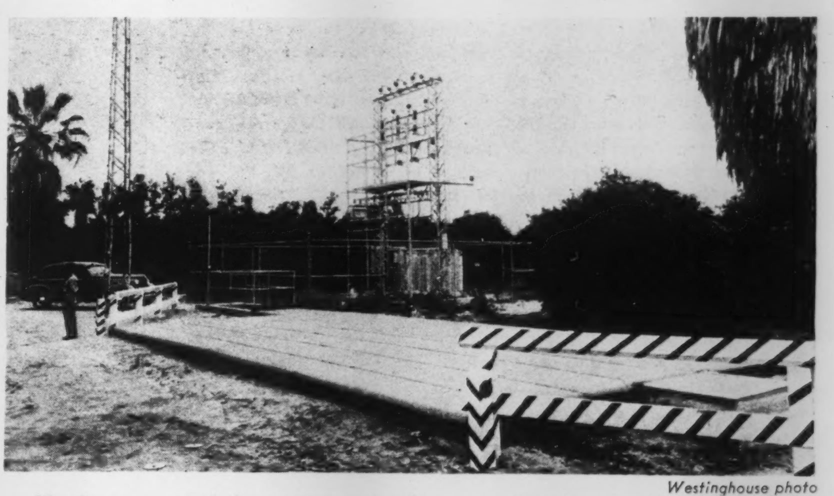
Of $22,400,000 to be spent this fiscal year on Grand Coulee, some $15,000,000 is to go for power, the remainder being used for wind-up work on the dam proper. Bulk of the power money is for the three big generators being installed this year (one of them has already been placed). It also includes initial payments on six others, which will not be ready for installation this year, and funds for construction for the second power house, foundations for which are already in place.

About $28,000,000 of the $37,800,000 to be spent on the Central Valley project this year is for power facilities, including power dams. Biggest items in the Central Valley schedule for fiscal 1942 include: $16,000,000 for Shasta Dam and $5,000,000 for the Shasta power plant; $2,000,000 to start Keswick Dam; $6,000,000 to finish Friant Dam; and a million for the Contra-Costa Canal.

At Colorado-Big Thompson project, about $1,500,000 will be spent on power installations at the recently completed Green Mountain Dam, and more than $2,000,000 on the Continental Divide Tunnel.

For the Davis power dam of the Bullshead project on the Colorado River, $4,000,000 has been appropriated, but it is only expected to spend about $1,800,000 this year.

Among the largest of the non-power projects under way this year is Provo River in Utah, Deer Creek Dam of this project is finished, and this year about $1,750,000 will be spent on the Duchesne and the Weber-Provo Diversion Canal.



Westinghouse photo

Underground booster station protects water supply

Designed to safeguard pumping equipment and insure delivery of an ample supply of water to an Army camp in California, an underground reinforced concrete booster station was constructed. Top of the underground station may be seen in the center foreground of the above illustration.

The station was designed to deliver 1,350 gpm. at a total head of 760 ft. through approximately 8 miles of 16-in. steel pipe, to an elevated storage tank. In this substation, 60-cycle, three-phase, alternating current is received at 33,000 volts and delivered to pumps at 440 volts.

Robert E. Stiggers photo

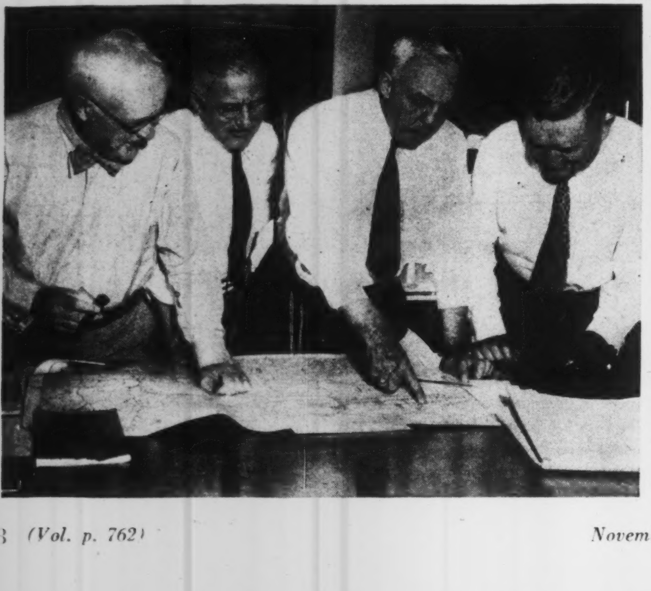
Construction of the first unit of Millcreek barrier dam at Cincinnati will be supervised by the group above. They are, left to right: G. M. WOOD, associate engineer, U. S. Engineers, who will be resident engineer on the project; R. C. VOGT, chief of the engineering division of the Cincinnati district, U. S. Engineers, in charge of design; FERD ROBERS, secretary-treasurer, Robers Construction Co.; JAMES W. DUNN, vice president, LaCrosse Dredging Co.; C. T. FOUST, associate engineer, U. S. Engineers, who will be assistant resident engineer; LT. COL. FRED T. BASS, district army engineer of Cincinnati; LOUIS RICHTER, president, Richter Transfer Co.; A. M. THOMPSON, president, LaCrosse company, and B. C. PETERSON, president, Robers company. Mr. Peterson and Mr. Dunn will be joint managers for the general contractors, the Robers and LaCrosse firms.

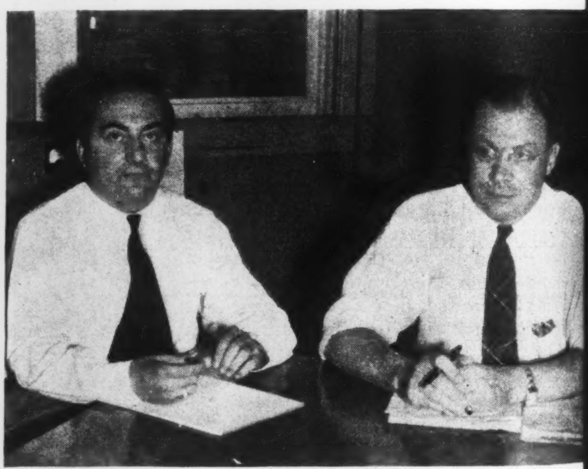
Advancing from assistant city engineer, a posi held since November, 1917, CHARLES E. DA (above) is now city engineer of Spokane W Mr. Davis, a graduate of the Colorado S College, has also worked as assistant city engi of Canon City, Colo. and with the Colorado & Iron Co. and the American Smelting & Ref Co. in Salt Lake City, Utah.

MEN AT WORK

Supervising some $275,000,000 worth of defense construction in the War Department's Zone 5 (headquarters Columbus, Ohio) has been the big job of the group below during the past few months. They are, left to right: THOMAS BENTLEY, president of A. Bentley & Son, Toledo, Ohio, and until recently zone operations officer; JOSEPH L. WEINBERG of Cleveland, zone architect; LT. COL. B. F. VANDERVOORT, zone constructing quartermaster for Zone 5; and CAMDEN P. FORTNEY, chief engineer for Zone 5. Mr. Fortney, consultant of Charleston, W. Va., has returned to private practice, as has Mr. Bentley.

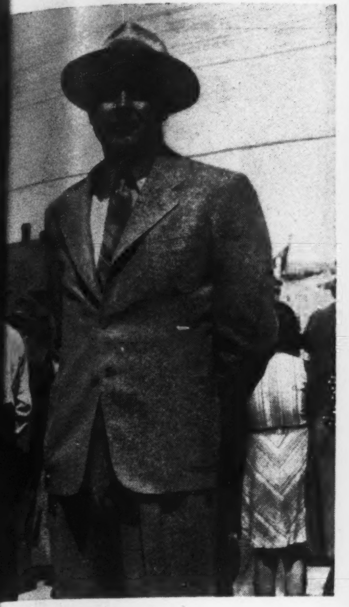
U. S. Signal Corps photo





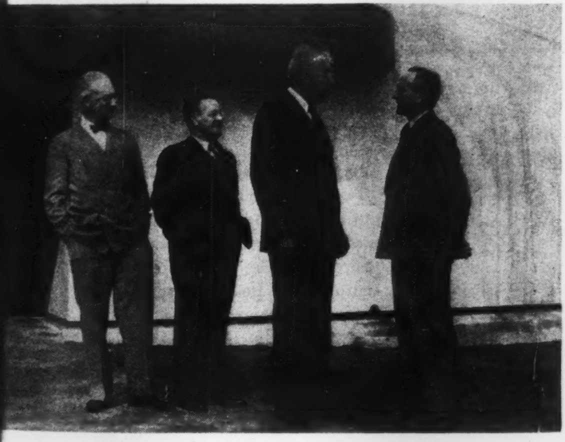
Top construction men at the Wolf Creek Ordnance Plant at Milan, Tenn. C. G. ATKIN (right, above), project manager, and GUY B. PANERO, ant project manager for the Ferguson-Oman Co. composed of the H. Ferguson Co. of Cleveland and the Oman Construction Co. of Nash associated for work on this government job. The project, five shell loa lines and a large igloo storage area, is being built under a fee con supervised by the constructing quartermaster for the Ordnance Departm U. S. Army.

Water supply and sewage disposal at "boom" towns is the chief concern of HOWARD D. SCHMIDT (right), sanitary engineer of Tennessee and secretary of the Tennessee-Kentucky Section of the American Water Works Association. New defense plants at several rural points have caused an influx of construction workers, multiplying the population of adjacent small towns and creating unusual loads on all the utility systems.

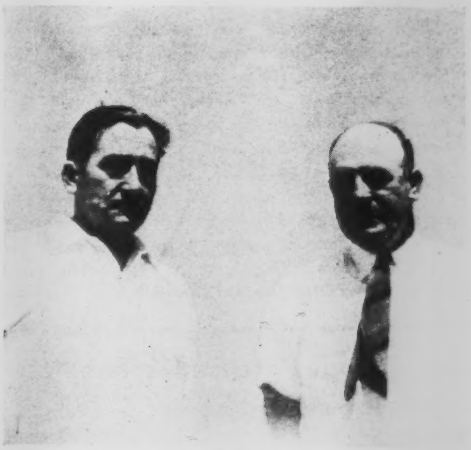


As city engineer, DAVID P. MILLER (left) represented the city of Rock Springs, Wyo., during the recent construction of three grade separation structures across the Union Pacific R.R. tracks at Rock Springs. From 1934 to 1939, Mr. Miller was superintendent of Water Division No. 4 for the state of Wyoming.

RGE T. HORTON, president, Chicago & Iron Co. reports below to the Navy on ating drydocks his company is fabricating. to right are: J. C. VOSBURGH, Washington sentative of Chicago Bridge; CAPT. J. J. NNING (CEC) USN; Mr. Horton; and DR. J. C. GEBHARD (CEC) USN. The ground is Mr. Horton's spheroidal tank din- room, which was being dedicated with a eon for members of the Am. Soc. of C. E. ding society's fall convention in Chicago.



Construction of a soil-cement apron for Flying School No. 1 at Avondale near Macon, Ga., was supervised by the two at the right. They are I. J. SCOTT (left) and J. C. SCOTT, members of W. F. Scott & Co., Thomasville, contractors for the work.



of the key men on the $54,000,000 Ravenna, Ohio, Ordnance Plant shown at the right. They are, left to right: S. E. HUNKIN, vice presi- of the Hunkin-Conkey Construction Co. and director of the Pacific ractors, Inc.; W. E. FLETCHER, general manager of the plant for the Powder Co.; LT. COL. R. S. CHAVIN, commanding officer and racting quartermaster for the Ravenna Ordnance Plant and Depot for War Department; and CARL A. NAU, a partner of Wilbur Watson Associates, architect-engineer for the project. Production at the t, which is considered the largest shell loading plant in the world, begun Aug. 18.

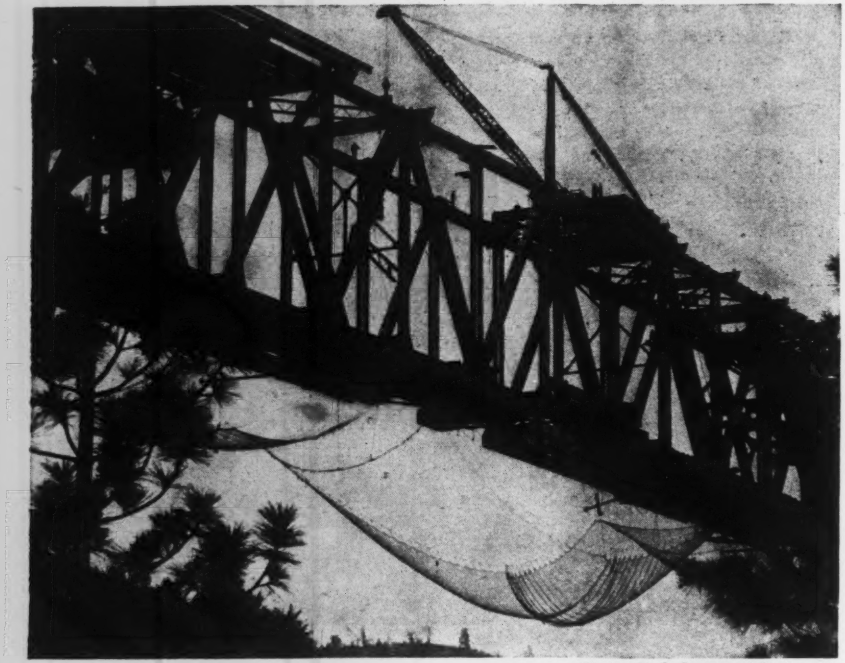
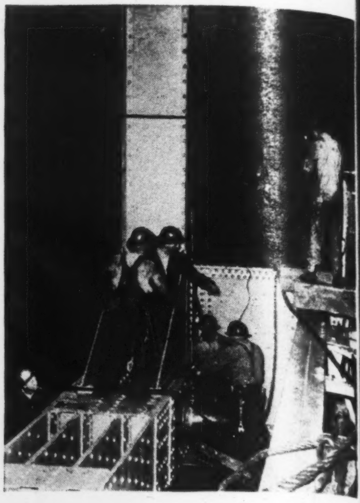


Photo: U. S. Bureau of Reclamation



Closure operations on the double-deck Pit River Bridge

Main line trains on the Southern Pacific's San Francisco-Portland run will be routed for the first time over the spectacular new 30-mile relocation around the Shasta Dam reservoir area next spring, it was indicated last week following closure of steel on the central span of the Pit River Bridge.

At an elevation about 500 ft. above the water of the Pit River, steel riggers drove connecting pins into place joining the two cantilever arms of the bridge. Riveters now are at work completing the connections of the central span of the structure, which is the highest double-deck bridge in the world (ENR, May 8, 1941).

In the illustration at right above, steel riggers are shown driving the last connecting pin on the lower deck. In the earlier picture (above) the traveler is shown erecting floor steel for the upper deck.

Built by the U. S. Bureau of Reclamation as part of the Central Valley project, the bridge will carry two railroad tracks on the lower deck and a four-lane section of U. S. Highway 99 on the upper deck across the deep Pit River Canyon 14 miles north of Redding, Calif.

Construction of the Pit River bridge piers was started in November 1939, and the first steel was placed for the superstructure in December 1940. Supported by towering concrete piers of record height, the heavy steel spans were erected from both sides of the canyon. The bridge has an overall length of 3,588 ft., including short highway approach viaducts on either side. The highway girder spans on the north side have yet to be erected.

The concrete floor of the highway deck has been poured on four spans at the south side and railroad track laying has started on the lower deck.

Union Paving Co., San Francisco, held the contract for the piers and abutments, and the American Bridge Co. erected the steel superstructure.

Blackout defense methods reviewed in booklet

The latest and most authoritative information respecting blackout methods for residences, factories, utilities, railroads, etc., is now available in a 60-page pamphlet, which may be obtained from the Superintendent of Documents, Washington, for 25c. Entitled "Blackouts", the pamphlet was prepared under the direction of the Chief of Engineers, U. S. Army, with suggestions by the National Technological Civil Protection Committee. The Office of Civilian Defense, under whose imprint the pamphlet is issued, emphasizes that its publication is not to be construed as a signal to start work immediately on any of the blackout procedures described; it is merely a guide for all those who, at some future date, may need to know what have proved to be the most effective blackout procedure.

Beginning with a chapter on planning blackouts, the pamphlet goes on to describe the various methods and materials for obscuring glazed surfaces, and then takes up, chapter by chapter, blackout methods and considerations applicable to private residences, stores, industrial buildings, municipal utilities and transportation lines. Structural details of various obscuration methods are presented.

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First concrete is poured on Keswick Dam

Concrete pouring was started Nov. 15 on Keswick Dam (a unit of the Central Valley project) in the Sacramento River 3 miles north of Redding, Cal.

Concrete was poured by means of cableways on the spillway section along the east bank of the river, south of the main portion of the dam.

Contract, held by Atkinson & Kier, contractor, calls for pouring of 96,000 yd. of concrete on the structure. Contract was let on Aug. 15 on a bid of $2,736,628.

Tuttle named director of PWR for New York

Appointment of Arthur S. Tuttle, for 48 years an engineering expert in the employ of the city of New York, to the post of director of the Public Work Reserve for the city of New York, was announced last week by Irving V. A. Huie, commissioner of public works.

Mr. Tuttle was graduated from New York University at the age of 20 with the degree of bachelor of science and civil engineer. He has served as chief engineer of the Board of Estimate, and consulting engineer of the City of New York, and has been chief technical adviser in all matters relating to city planning, grade-crossing elimination, zoning, street improvements, sewers, sewage-treatment plants and many other engineering projects. He is a past president of the Am. Soc. C. E.

Mr. Tuttle is head of the consulting firm of Tuttle, Seelye, Place and Raymond and consulting engineer to the WPA.

Philadelphia to spend $50,000,000 for street work

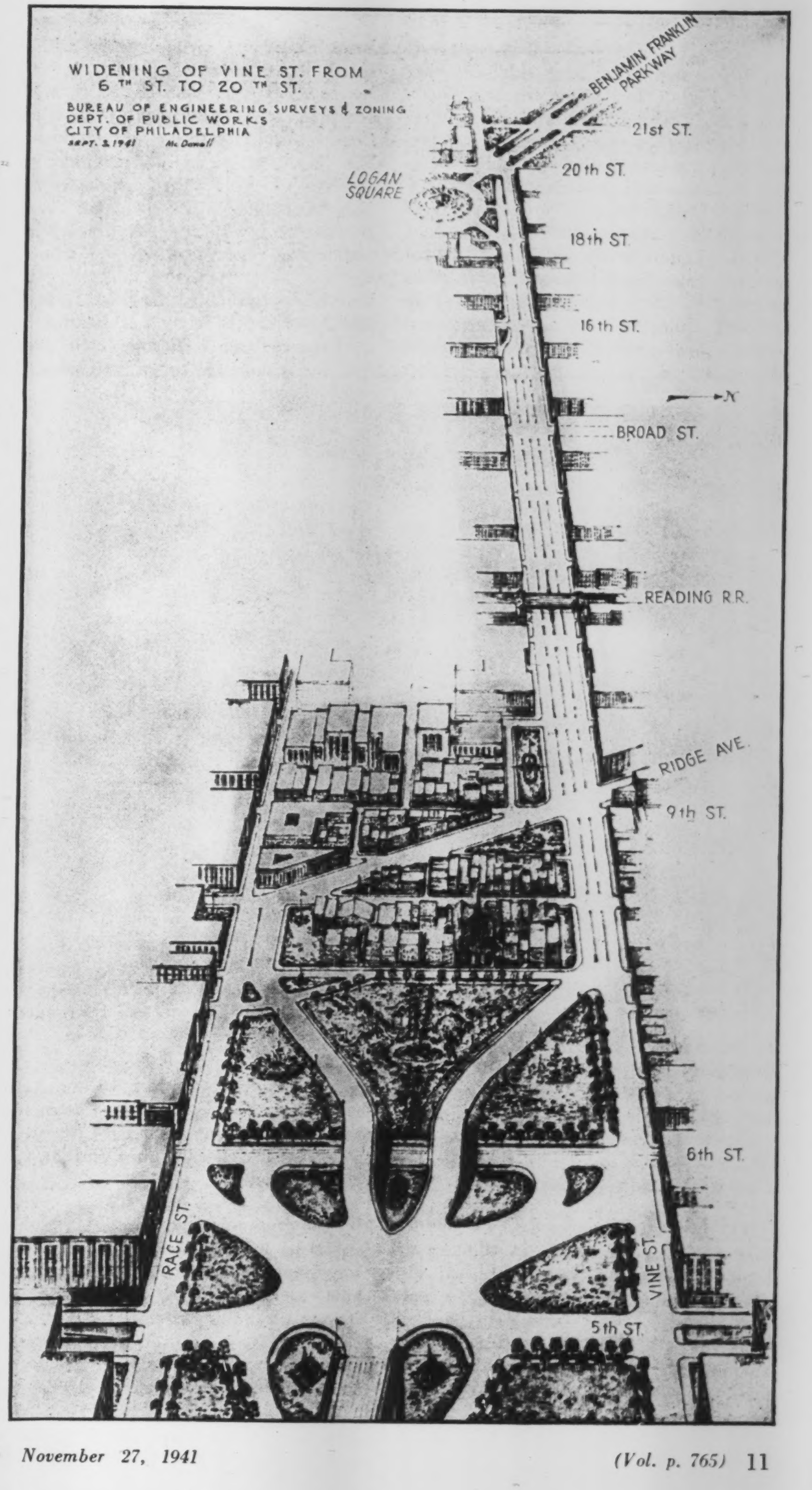
In accordance with a bill passed July 10, 1941, by the Pennsylvania state legislature, Philadelphia has been provided with $50,000,000 of state funds for street work during the next five years. The act permits the city and the state to enter into agreements whereby certain Philadelphia streets can be rebuilt without necessity of separate legislation.

Four years ago the state took over 154 miles of Philadelphia streets, but on those routes no state money could be spent except for paving and other necessary maintenance. However, in accordance with the bill passed last summer, money from the $50,000,000 fund may be spent at the rate of not more than $12,000,000 in any one year for purchasing right-of-way, construction of new bridges, relocation of storm sewers, street widening, and grade-separation work, in addition to regular highway construction.

First year's program

Now well advanced as to planning are seven city projects that are to be carried out as part of the first year's program. The seven jobs, including those shown and some of which may soon be advertised for bids, are: (1) Construction of an underpass to carry Hunting Park Ave. under Ridge Ave.; (2) improvement of Vine St. as the approach to the Delaware River bridge; (3) construction of an overpass to carry Roosevelt Boulevard over 5th St.; (4) improvement of Passyunk Ave. from 63rd St. to Essington Ave. and then Essington Ave. to Island Ave.; (5) improvement of Island Ave. from Buist to Tinicum Ave.; (6) improvement of 34th St., Vare Ave., and Oregon Ave. from Gray's Ferry Ave. to 18th St.; and (7) the widening of four bridges on Roosevelt Boulevard.

For some of the work the Pennsylvania State Highway Department will do the planning and design, while city forces will do this work for other projects. John H. Neeson, Philadelphia director of public works, will be in charge for the city, and T. C. Frame, chief engineer of the state highway department, will handle the state work. Cost of planning work by the highway department and the city will not be charged against the $50.000,000 fund.


WIDENING OF VINE ST. FROM 6 TH ST. TO 20 TH ST.
BUREAU OF ENGINEERING SURVEYS & ZONING
DEPT. OF PUBLIC WORKS
CITY OF PHILADELPHIA
SEPT. 2 1941
Mc Donell
BENJAMIN FRANKLIN PARKWAY
21st ST.
20 th ST.
LOGAN SQUARE
18th ST.
16 th ST.
N
BROAD ST.
READING R.R.
RIDGE AVE.
9th ST.
6th ST.
RACE ST.
VINE ST.
5th ST.

To eliminate jams on Vine St. due to traffic from the Delaware Bridge, Vine St. will be improved as a wide boulevard with separation of opposing traffic.

MEN AND JOBS

Blake R. Van Leer, dean of the school of engineering at North Carolina State College, Raleigh, N. C., has just been appointed chairman of the Committee on Sections and Branches of the Society for the Promotion of Engineering Education.

E. N. Noyes,who has been chief engineer of the Eighth Zone, Constructing Quartermaster's Office, Dallas, Tex., since the zone set-up was organized, has resigned to return to his private consulting practice with the firm of Myers & Noyes, Dallas, Tex. Mr. Noyes will make his headquarters in Corpus Christi, Tex. No successor was named to Mr. Noyes in the zone C.Q.M. office where **Col. Roy Leibsle** was placed in general charge of the engineering and architectural section with **Maj. Carl T. Baer** in charge of the engineering section.

Frank Walter, a WPA engineer with offices in Tacoma, Wash., has been appointed engineer of the Intercounty River Improvement Commission of Seattle.

Victor Janda, hydraulic engineer at Storm Lake, Iowa, for the Iowa conservation commission, has resigned recently to accept a position as appraisal engineer for the farm credit administration at Omaha, Neb.

Svend A. Bang, Cedar Falls, Iowa, has been appointed a field engineer at Minneapolis, Minn., for the Cramp Ship Building Co.

Walter Turner, superintendent of the city water department, Cambridge, Ohio, has received an appointment for service in emergency defense work as assistant engineer for the U. S. Public Health Service at Washington, D. C. He has been granted a leave of absence by city officials.

A. M. Bain, structural engineer with Dominion Bridge Co., Ltd., has been loaned to the Department of Munitions and Supply, and is acting as a technical assistant to **Prof. R. E. Jamieson,** director of the Army Engineering Design Branch, Canadian Government.

Joe F. Minter, formerly district director of operations for WPA in the Austin Tex., district, has been appointed district manager of that district to succeed **C. E. Wayman,** who died October 17, 1941. Mr. Minter has been district director of operations in the Austin District since the organization of WPA.

Edward H. Beck is now on the staff of E. G. M. Cape and Co., and is located at Botwood, Newfoundland. He was previously connected with the construction of the new National Research Council laboratories at Ottawa.

John F. Jacobs, civil engineer with the U. S. Department of Interior, office of Indian Affairs, at Pine Ridge, S. D., has accepted a position with the Public Roads Administration, at Harrisburg, Pa. Mr. Jacobs was an engineer with the South Dakota state highway commission from 1920 to 1939, during the last six years of which period he held the position of state maintenance engineer.

Eric Grant has joined the Royal Canadian Air Force and is located at Halifax with the Works and Buildings Department. For the past two and a half years he was employed with the Canadian National Railways on design and drafting work for the Montreal terminal station.

Jean Lefort has joined the staff of Stevenson and Kellogg, Ltd., management engineers, Montreal. He was graduated in civil engineering from McGill University in 1936, and in 1939 he obtained the degree of Bachelor of Civil Law from the same university. Lately was connected with the Aluminum Co. of Canada, at Arvida, Que.

Included in seventeen promotions to higher ratings in the electrical industrial, mechanical, petroleum and structural divisions of the Stone & Webster Engineering Corp., Boston, Mass., are **Edward E. Bigelow, Robert D. Chellis** and **Linton Kerr,** who will henceforth be designated as structural engineers in the organization. **Harry S. Houghton** was appointed chief petroleum engineer, **Robert J. Carter** and **Arthur W. Pratt** being named petroleum engineers. **Chester W. Welch** and **Charles A. Whittemore** were named industrial engineers.

C. S. Christian, engineer for the Arkansas State Flood Control Commission, has been assigned temporarily to the priorities division of the OPM at Little Rock, Arkansas.

W. A. Stanton, former district highway engineer for the Arkansas state highway Department at Batesville, Ark., has gone to Waco, Tex., to accept a civil service commission.

Harold Berg, civil engineer, has accepted a position as assistant professor of the engineering department at North Dakota State College at Fargo. Mr. Berg resigned a position as chief draftsman with the State Highway Planning Survey at Atlanta, Georgia to accept his new duties. He was formerly chief draftsman of the South Dakota Highway Planning Survey, and had worked as an engineer with the South Dakota state highway commission from 1933 to 1937.

Guy M. Vincent, WPA engineer for Dodge City, Kan., has been appointed to take the place of **F. Sharon Foster,** area engineer at Ellis, who recently resigned.

Virgil Funk, civil engineer recently employed at Richmond, Va. has accepted a position with the War Department and will be located at Trinidad. Mr. Funk is a graduate of South Dakota State College.

In the offices of the 7th Zone constructing quartermaster at Omaha. **J. A. Wyman,** formerly associated with John Latenser & Sons, Inc., of Omaha, architects and engineers, is now an assistant civil engineer; **A. S. Harrington,** a mechanical engineer of Omaha, is now associated with the engineering department, and **Herbert Fritz,** former maintenance engineer for the Burlington, Iowa, schools, has taken a position as associate engineer.

Carl F. Koebrick, since 1937 WPA area engineer in charge of construction in 12 northwest Iowa counties, has been named superintendent of construction for a new air defense base at King Cove, Alaska. **Earl A. Stames,** of Spencer, Iowa, takes over Mr. Koebrick's former position.

Ernest Stokes, who has been a bridge designer of the Iowa highway commission for 14 years has resigned to become assistant structural engineer in the U. S. Engineer's office at Omaha, Neb.

Several employes of the Iowa Conservation Commission have left recently for new jobs. **Norman Hall,** assistant chief engineer of the commission, is now area planning engineer for the Public Work Reserve. **Edwin Lohso,** another commission engineer, has accepted appointment as associate engineer of the Bureau of Yards and Docks of the Navy. **John B. Simmons** has resigned to become an engineer with the quartermaster corps of the seventh corps area, Omaha. Neb.

M. F. Deets, civil engineer, has been appointed county engineer for Adams County, Neb., with headquarters at Hastings. He succeeds the late C. A. Heartwell, who held that position for many years.

AFL grants welders union "one-card" right

Labor troubles involving welders in the recent West Coast shipyard strike and which threatened to spread to other defense projects, have been settled. Through the office of Sidney Hillman, associate director of the Office of Production Management, announcement has just been made that nine American Federation of Labor metal trades unions have agreed to grant welders "one-card" privileges and cease alleged discriminations against welders involved in the West Coast shipyard strike.

The recent strike developed principally over complaints of welders that because of frequent shifts in jobs they were compelled to hold membership cards in several different unions and pay numerous fees and dues in order to work. (*ENR* Nov. 13, vol. p. 684).

The AFL states: "There will be a flexibility in the performance of welder work in every shipyard, which will prevent any unjustified interference with the orderly and continuous operations of production, this to be established through conferences with management, and with the unions at interest. The international unions hold that it is not necessary for a workman performing welding to carry more than one union card, and furthermore, that there should be no excessive fees."

Building union wants same treatment

Organized welders in the building and construction industry are expected next week to ask the Building Trades Department of the AFL to grant them the same "one-card" system which was approved last week by the Metal Trades Department. Jurisdiction over welders is now shared among a number of unions—principally the boilermakers, ironworkers, electricians, machinists, steamfitters and plumbers—according to the job being worked on. This means that a welder who moves around much must hold cards in several different unions, and in recent months the welders have been seeking recognition from the AFL as a separate international union.

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Steel research fellowship open at Lehigh University

A research fellowship at Lehigh University is being sponsored by the American Institute of Steel Construction, and is now available to civil engineering graduates holding a bachelor's degree. The holder of this fellowship may carry on half-time graduate studies toward an M.S. or Ph.D. degree. The annual salary is $750 for ten months of half-time research work, together with freedom from tuition fees. Problems in modern design of steel structures are investigated analytically and by structural test. The research fellowship may start Feb. 1, 1942 or Sept. 1, 1942, and the fellowship will normally extend over a two-year period.

Applications should be forwarded to Dr. Bruce G. Johnston, associate director Fritz Engineering Laboratory, Lehigh University, Bethlehem, Pa.

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Ontario starts power conservation program

In the interests of conserving power for war production industries, the Hydro Electric Power Commission of Ontario has forbidden the lighting of sections of the Queen Elizabeth Way, divided super-highway between Toronto and Niagara Falls. Lighting at cloverleafs, blinkers and dangerous sections will be continued for the present.

Sewage odors are costly to High Point, N. C.

Thirty-seven suits have been filed against the city of High Point, N. C. by property owners claiming that the value of their lands below the city's west side sewage disposal plant had been damaged by the odors from sewage emptied into Rich Fork Creek. Fourteen of the suits have been tried and resulted in judgments for the plaintiffs.

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Extensive lane marking planned by Indiana

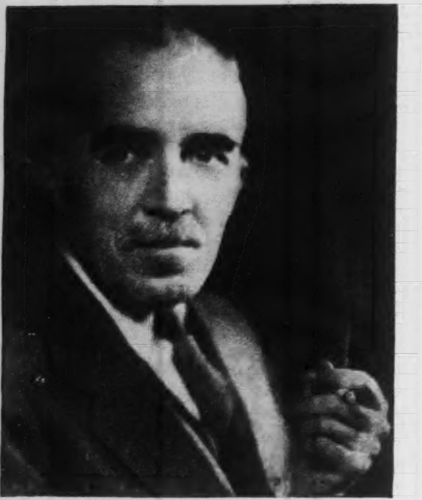
The Indiana State Highway Department, through its maintenance division, will undertake this winter to mark and renew the black center-line on 3,000 miles of concrete paving. Each of the six highway department districts will use a center striping machine that applies liquid asphalt at 40 gal. per 1 mile.

Peter Fish photo

Chicago "Ground Hogs" elect new officers

Celebrating the close of their first year of organization, members of the Chicago Ground Hog Club paused long enough in an evening of hilarity on Nov. 18 to elect officers for the coming year. Membership in the club now approaches 200, and while they can not equal the size and experience of their eastern rivals, the New York Moles, the Chicago group claim they can beat the New Yorkers in noise and enthusiasm.

The above picture shows retiring president George Salter (left) Chicago Subway Commission, greeting the new president, Richard F. Kelly (right), Chicago Sanitary District, while meeting chairman V. E. Gunlock introduces them to the audience. Other officers elected are: Vice presidents, H. W. Richardson, Engineering News-Record, and Wm. H. Sallee, Commonwealth Edison Co.; secretary, Frank H. Quartullo, sanitary district; treasurer, J. Walter Grimm, subway commission; sergeant-at-arms, Harry Lagerstrom, subway commission, directors: George DeMent, subway commission; Thomas D. Garry, city sewer department (the "voice of the banshee" at the last Democratic national convention); Lloyd M. Johnson, commissioner of streets and electricity; Thor Sogge, of the M. J. Boyle Co.; J. P. Gallagher, of the park district; and George Salter, of the subway commission.



Underwood & Underwood

Fleming made head of Federal Works Agency

The President last week nominated Brig. Gen. Philip B. Fleming, Wage-Hour Administrator, to head the Federal Works Agency. Federal Works Administrator John M. Carmody has resigned that post because of ill health to take a less onerous job as a member of the U. S. Maritime Commission.

Change of administrators for FWA seems to many in Washington to presage a new and more significant role for that office in the defense program. The three major fields of civilian defense construction—roads, housing and community facilities—head up under the Federal Works Administrator.

That the Administration should now throw one of its ace trouble shooters into the post of Federal Works Administrator suggests that the President is relying on FWA to pull together and control the closely related programs of housing, defense public works and road building with a minimum of red tape. Those who know Gen. Fleming feel that he is not the man to take a job without demanding and getting the authority he needs to do it right.

Philip B. Fleming is an army engineer who has been on detached duty for a considerable part of the past decade to take special assignments requiring the services of a man of high diplomatic skill. From 1933 to 1935 he served as assistant administrator of the PWA in charge of personnel and wage questions. Subsequently he returned to service in the Corps of Engineers and was sent to Eastport, Me., to be district engineer on the Passamaquoddy tidal power project. When Passamaquoddy shut down he was for a time with the Resettlement Administration as a coordinator. In October, 1939, Col. Fleming was made Wage-Hour Administrator and has served in that capacity for the past two years.

JOBS OF THE WEEK

SYNTHETIC RUBBER PLANT, Naugatuck, Conn.

W. J. Megin, Inc., Naugatuck, Conn. has been awarded general contract for construction of 2-story, 80x180 ft. brick, steel, concrete factory to manufacture synthetic rubber, by Naugatuck Chemical Division, U. S. Rubber Co., Naugatuck, Conn. Estimated cost is $2,250,000. Underground piping was awarded to C. N. Flagg & Co., Inc., Meriden, Conn. Fletcher Thompson, Inc., Bridgeport, Conn. is engineer.

ARSENAL, Pine Bluff, Ark.

Sanderson & Porter, New York, N. Y., have been awarded a contract by the War Department, to design and construct an $8,625,000 Arsenal at Pine Bluff, Ark. The project, which is for the Chemical Warfare Service will manufacture and assemble incendiary munitions.

GLASS MANUFACTURING PLANT, Fairmount, W. Va.

Westinghouse Electric & Mfg. Co., of East Pittsburgh, Pa., will construct a glass manufacturing plant by separate contracts. Estimated cost is $1,800,000. Forter-Terchmann Co., Pittsburgh, Pa. is consulting engineer.

WAREHOUSE, Groton, Conn.

F. H. McGraw & Co., Hartford, Conn. has been awarded contract for constructing a 4-story warehouse, 65x223 ft., and a 2-story, 64x124 ft. warehouse, also laundry, fire station and garage at submarine base. Contract was awarded by Bureau of Yards & Docks, Navy Department, Washington, D. C. Estimated cost of these structures is $1,000,000.

CRACKING PLANT, Newark, N. J.

The Standard Oil Company of New Jersey, with headquarters at Elizabeth, has awarded contract to Foster-Wheeler Corp., New York, N. Y. for erecting a catalytic cracking plant at their Bayway Refinery. Cost of the project is estimated at $4,000,000.

MAGNESIUM REFINING PLANT, Austin, Tex.

Contracts for plant to extract dolomite ore, a magnesium refining plant, and utilities, including water supply, sanitary sewer system, paving, lighting and natural gas lines has been let by Union Potash Co., subsidiary of International Agricultural Co., of New York, to the Austin Co., Cleveland, Ohio and Freeport, Tex. Estimated cost of the project is $1,174,000.

FLOATING DRY DOCK, North Bergen, N. J.

Harris Structural Steel Co., New York, N. Y. will build 18,000 ton brick, steel floating drydock in Hudson River for Robins Drydock & Repair Co. Estimated cost is $2,500,000. Frederic R. Harris, New York, N. Y. is engineer.

FLOATING DRY DOCK, New Orleans, La.

Chicago Bridge & Iron Co., Chicago, Ill., will construct a brick and steel, floating dry dock of 18,000 tons capacity for Todd Johnson Dry Docks, Inc., New Orleans. Estimated cost is $2,500,000. Frederic R. Harris, Inc., New York, is engineer.

MACHINE SHOP, Indian Orchard, Mass.

Stone & Webster, Inc., of Boston, Mass., has been awarded contract for the design and construction of a 1-story, 75x300 ft. brick and steel machine shop; and a 1-story, 480x600 ft. brick and steel foundry building for the Chapman Valve Co., Indian Orchard, Mass. Estimated cost is $3,000,000.

ADDITIONAL FACILITIES at Naval Air Station and Hospital, Corpus Christi, Tex.

Brown & Root, Inc., W. S. Bellows and Columbia Construction Co., have received contract to construct additional facilities at the Naval Air Station and Naval Hospital, from Bureau of Yards & Docks, Navy Department, Washington, D. C. Cost of the work is estimated at $5,955,550.

SHIPWAYS, Mare Island, Calif.

Henry J. Kaiser Co., Oakland, Calif., will construct five double shipways, machine and electric shops at the Mare Island Navy Yard. Contract was let by Bureau of Yards & Docks, Navy Department, Washington, D. C. The work is costing $5,624,000.

STEEL PLANT, Warren, O.

Uhl Construction Co., of Pittsburgh, Pa., has been awarded contract to construct an addition to the plant of Copperweld Steel Co., Warren, O., to produce 85,000 tons of steel per year. Estimated cost is $4,000,000.

APARTMENT, Washington, D. C.

Contract for the construction of seventeen apartment buildings in Washington, D. C., has been awarded to Paul T. Stone, Inc., Washington, at an estimated cost of $8,000,000. The project, which will include in addition to dwelling units, a shopping center, theatre and parking space. Mayfair Gardens, owners, and Albert I. Cassell, architect, Washington, D. C.

NOTE—Additional bidding and contract news on over 800 projects large and small appear in the Construction News sections beginning on page 19.

How defense public works funds have been allocated

School buildings form biggest project group. Work to be concentrated on coast and in southern camp areas.

Four and a half months after the President approved an appropriation of $150,000,000 to aid defense-expanded communities in providing essential public services, enough projects have now been approved to use the bulk of the available funds. As of Nov. 17, some $90.000,000 had been earmarked for loans and grants. In addition, about $6.000.000 is to be used for administrative expenses. A reserve is being set up to cover possible increases in cost of projects; no amount has yet been determined for this reserve, but it may run to $15-20,000.000. Moreover, it is intended to hold a fairly substantial sum available for increases in the scale of approved projects when stepped-up defense activity makes this necessary. Thus not many more projects can be included in the program.

Major reason, apparently, for the long delay in setting up the program is the appalling red tape in which it has become enmeshed. After a project has been worked out by local officials and the field agents of the Defense Public Works Administration, it must be approved in Washington by the Federal Works Agency, the Army or Navy, the Federal Security Agency, the Coordinator of Health and Welfare, and the White House.

Moreover, there are, probably unavoidably, no standards for percentage or terms of federal contribution, and these must be negotiated for each project. So far, the federal contribution has run to about 70 percent.

Table I—Approved DPW Projects by Type

As of November 17, 1941

Major Type	Number of Projects	Total Estimated Cost	Grant	Loan
School Buildings	202	$33,629,984	$27,019,223	$63,000
Hospitals & Institutions	78	15,122,590	10,068,480	110,000
Sewer Systems	78	25,759,849	13,867,286	1,688,000
Water Systems	91	26,675,469	16,081,109	2,818,272
Streets & Highways	6	1,121,880	769,380	
†Recreation Facilities	246	16,488,670	16,422,270	
*Miscellaneous Facilities	8	1,113,047	962,022	
Totals	709	$119,911,489	$85,153,770	$4,679,272

* Police and Fire Protection and a few Utilities Projects.
† Being built Army Quartermaster Corps.

Table II—Allotments for DPW Projects by States

As of November 10, 1941

State	Number of Projects	Total Estimated Cost	Sponsors' Contributions	Grants	Loans
Ala.	23	$2,243,669	$457,217	$1,636,452	$150,000
Ariz.	5	288,277	20,000	268,277	....
Ark.	2	196,000	....	196,000	....
Calif.	67	14,371,377	515,694	13,858,683	....
Colo.	7	431,300	124,750	306,550	....
Conn.	15	2,107,507	806,109	1,301,398	....
Fla.	28	1,142,710	1,142,710	1,661,955	80,000
Ga.	20	2,391,088	581,026	1,710,062	100,000
Idaho	1	45,000	....	45,000	....
Ill.	32	2,122,863	196,170	1,705,693	221,000
Ind.	19	3,105,209	310,200	2,713,584	81,425
Ia.	3	194,400	25,000	167,400	....
Kans.	10	560,456	76,690	483,766	....
Ky.	10	500,490	47,000	425,490	28,000
La.	36	3,987,150	305,788	2,748,362	933,000
Me.	4	665,710	....	665,710	....
Md.	10	936,800	145,380	791,420	....
Mass.	11	969,711	152,031	707,680	110,000
Mich.	32	8,612,600	2,098,327	5,324,273	1,190,000
Miss.	22	3,540,736	819,324	2,521,412	200,000
Mo.	15	2,230,342	....	2,230,342	....
Nebr.	1	390,000	....	390,000	....
Nev.	3	107,180	....	107,180	....
N. H.	5	1,333,376	293,500	1,039,876	....
N. J.	6	339,785	....	339,785	....
N. Mex.	3	96,852	1,000	95,852	....
N. Y.	9	1,638,809	787,023	851,786	....
N. C.	36	6,991,678	1,066,791	5,524,887	400,000
Ohio	7	3,497,562	2,303,192	1,194,370	....
Okla.	7	1,199,494	585,000	614,494	....
Ore.	13	553,066	104,103	351,963	97,000
Pa.	7	588,695	36,200	404,495	148,000
R. I.	7	1,095,700	35,309	1,060,391	....
S. C.	17	3,244,070	773,776	2,470,294	....
Tenn.	15	1,880,012	386,500	1,265,512	228,000
Tex.	71	11,263,173	2,688,390	8,011,936	562,847
Utah	1	173,000	90,000	83,000	....
Vt.	1	60,000	....	60,000	....
Va.	44	19,774,881	10,538,135	9,086,746	150,000
Wash.	26	6,107,469	1,376,204	4,731,265	....
W. Va.	4	222,225	....	222,225	....
Wis.	2	180,000	90,000	90,000	....
Wyo.	4	293,000	18,000	275,000	....
Totals	687	$117,803,797	$29,650,539	$83,473,986	$4,679,272
Territories and Outside of Continental United States					
	26	$4,390,420	$654,000	$3,736,420	....

Sanitation and schools big items

Predominance of school buildings among the approved projects is shown by Table I, with sewer and water jobs neck and neck for second place. The geographical distribution is indicated by Table II. It will be noted that the bulk of the money has gone to the aircraft center in California, the shipbuilding areas of Washington, Virginia, and the other coastal states, the newly-expanded industrial centers of the mid-West, and the great army camp areas in the South-East.

The two tables are not comparable, since they are on different bases and for different dates, but they give a good indication of the spread of projects.

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Intracoastal Canal work nears completion

Last link of the Intracoastal Canal between New Orleans and Corpus Christi, Tex., will be completed late this month, but opening of the waterway in its far western link will be delayed until February because of shoaling, which has developed near the Brazos and Colorado rivers, according to a recent statement of the Corps of Engineers.

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New contract covers more Pacific naval bases

The Bureau of Yards and Docks, Navy Department, Washington, D. C., has awarded a $59,890,000 contract for additional naval base facilities at Hawaii and other Pacific islands. The work will be done by the Hawaiian Dredging Co.; Turner Construction Co.; Morrison-Knudson Co., Inc.; J. H. Pomeroy & Co., Inc.; W. A. Betchel Co.; the Utah Construction Co.; and The Byrne Organization.

Foundation exploration at Bull Shoals Dam

A report by Col. T. F. Kern, Little Rock district engineer, U. S. Engineers, states that foundation exploration at the Bull Shoals Dam site on the upper White River will be started at an early date. Bids have been received and work will be started 15 days after issuance of a notice to proceed, following the awarding of contracts.

Investigations will consist of drilling about 6,700 ft. of 2⅛-in. holes, about 130 ft. of 36-in. exploratory holes and excavating 7,500 cu.yd. of test trenches.

Authorization for the work was received by the Little Rock district office, U. S. Engineers, on instructions from the chief of engineers to make a definite project plan for the Bull Shoals Dam, and Table Rock Dam, three miles west of Branson, Mo. Both dams were authorized by Congress in the 1941 Flood Control Act as multiple-purpose projects for flood control, hydro-electric power, recreation and conservation.

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Waterwork improvements planned by Tulsa, Okla.

A waterworks improvement program, totaling $1,423,669, has been ordered by the Tulsa, Okla., City Commission. W. F. McMurray, superintendent of the Tulsa Water Department, has been engaged to prepare plans and specifications for the initial part of the program, which includes extension of the Mohawk Park filtration plant, construction of a mixing basin, and installation of a 24,000,000 gpd. pump. Estimated cost of these projects is $340,000. A. B. Jewell, assistant water superintendent, will take over active duties of Mr. McMurray during his assignment in carrying out the extended waterworks program. A Federal Works Agency grant of $150,000 and city bonds of $190,000 are already on hand to start the work.

The city has ordered a bond election for Dec. 2, to raise $3,833,000. Future construction will depend upon outcome of this election. The Federal Works Agency has approved a grant of $167,669 to supplement $39,226 in the bond issue for construction of an 18,000-ft. 36-in. force feeder main from the Mohawk pumping station into the city, a coagulation basin and a 50-hp. boiler, accessories and building extension.

Remainder of the $1,423,669 in water improvements will be $524,775 for nine distribution system improvements, providing the voters approve the bonds at the Dec. 2 election.

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Women draftsmen hired in state highway office

The Pennsylvania Department of Highways has announced that five women have been added to the organization as draftsmen in the Ardmore district office, which partially relieves the shortage of personnel created by the demands of the defense program. Officials of the department state that satisfactory work is being done by these new members of the staff, and it is possible that other women will be added to the staff as the need arises. Although all of the districts composing the state highway department have had numerous registrations by women, the Ardmore district office is the only one so far which has availed itself of this talent. At least one of the five women added to the staff has had wide experience in drafting work, having served in the Philadelphia Navy Yard during the first world war. The other four women hold the position of junior assistant, the classification for beginners.

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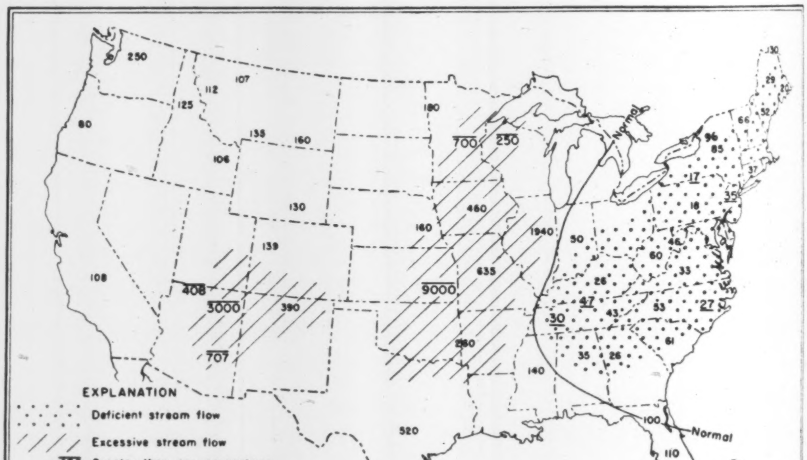
Defense public works started at Newport News

Work was started last week on a million dollar waterworks improvement for Newport News, Va., the first utility project for which bids were called under the Lanham Act, which made funds available for defense public works. In September a federal grant of $803,600 was made to the Newport News Water Works Commission to aid in the installation of a new 6 mgd. filter plant, 17 miles of transmission main, and pumping facilities in this defense area where water demands have grown from 4.5 to 8.5 million gallons per day.

Newsom and Aldrich of New York City, consulting engineers on the work, report that the project has received an A-3 priority rating from the OPM, thus making it the first DPW project to receive such consideration. Contractor on the job is the Bass Engineering and Construction Co. of Detroit, who bid $988,689. The engineers' preliminary estimate totalled $1,060,420, on which basis a federal grant of almost 70 percent was made. After allowances for engineering and contingencies, the low bidder proved to be 7 percent below the engineers' estimate and the high bidder was 5½ percent above the same.

Floods in Midwest, drought in East, marked October

Water conditions throughout the United States during the month of October, as revealed by the accompanying map showing stream flow in percentages of normal, were spectacularly variable. Representative rivers in eighteen eastern states averaged 39 percent of October normal, continuing a deficiency that has persisted for the past twelve months; until snow melts next spring there is little opportunity for filling depleted reservoirs in this area. In contrast to the eastern drought, the area between the Mississippi River and the Rocky Mountains experienced record-breaking streamflow. Southeastern Kansas was 9,000 percent of October normal, which spelled damaging floods. In the Oklahoma, Kansas, Missouri, Arkansas area, unusually high stages were observed on the Kaw, Verdigris, Neosho, Washita, Arkansas, Canadian, North Canadian, Osage and Cuivre rivers. In the Southwest water conditions are favorable.



U. S. DEPT. OF THE INTERIOR
GEOLOGICAL SURVEY

OBITUARY

Edwin C. Eckel, chief geologist of the Tennessee Valley Authority since 1937, died Nov. 22, at Nashville, Tenn. Mr. Eckel received a bachelor of arts degree from New York University in 1895, and a civil engineer degree the following year. He was assistant geologist of the U. S. Geological Survey from 1902 to 1905. He served with the U.S. Army Engineers in France during the World War, with the rank of Major. He was a lifetime honorary member of the American Society of Civil Engineers and a Fellow of the Geologic Society of America.

Allen E. Sedgwick, civil engineer and geologist, died at Los Angeles, Calif., Nov. 16, at the age of 60. From 1918 to 1929 he was a member of the faculty of the University of Southern California, and during the past two years he has been consulting engineer for the Imperial Valley Irrigation District.

Francis W. Parsons, 58, civil engineer, died in Glendale, Calif., on Nov. 17. Mr. Parsons was employed by the Los Angeles City Engineer office.

Walter H. Meier, 55, chief civil engineer for the Atlantic Refining Co., since 1923, died at Arlington, Tex., Nov. 16. During the World War he served overseas with the 7th U. S. Engineers, holding the commission of Captain.

Manford W. Furr, 53, died recently at Manhattan, Kans. Mr. Furr was a professor in the department of civil engineering at Kansas State College. He received a bachelor of science degree in civil engineering in 1913 and degree of civil engineer in 1925 at Purdue University, and in 1926 received a master of science degree in civil engineering at Kansas State College.

James M. McCleary, 62, resident engineer in Cuyahoga County for the Ohio State Highway Department, died in Austinburg, Ohio, Nov. 10.

James G. Gwyn, 83, civil engineer, died recently at Denver, Colo. Mr. Gwyn had served as chief engineer of the Denver and Rio Grande Western Railroad, as well as supervising construction of many railroad lines in Mexico.

James Lawrence, 73, retired highway engineer and contractor, died Nov. 16, at Denver, Colo. Mr. Lawrence was in the office of the Denver City Engineer for 32 years, having left this position in 1918 to organize the Gibbons-Lawrence Construction Company.

Lardner V. Morris, 71, former chief engineer of the Long Island Railroad, died Nov. 15 at Bristol, Pa. He was made valuation engineer in 1914, and in 1917 was promoted to chief engineer. Mr. Morris served in this position until 1926 when he became consulting engineer.

Lt. Com. E. W. C. Nice, 50, United States Naval Reserve, died Nov. 15, at Norfolk, Va. At the time of his death he was supervising construction at the marine aviation base at Cherry Point near New Bern, N. C.

Robert Edward Bryson, 57, supervisor of road construction for the WPA died at Asheville, N. C., Nov. 11.

August Estelle, civil engineer, died Nov. 13, in Quebec.

H. E. Barthman, 75, retired street and road contractor and former Franklin County commissioner, died at Columbus, Ohio, Nov. 17.

Franklin T. Sutherland, 87, pioneer mining engineer in the Northwest, died Nov. 18, at Jacksonville, Fla.

CONTRACTS AND CAPITAL

Engineering Construction awards for the week, $110,331,000, are well above the $64,100,000 reported for the short preceding week, and 24 percent higher than in the corresponding 1940 week.

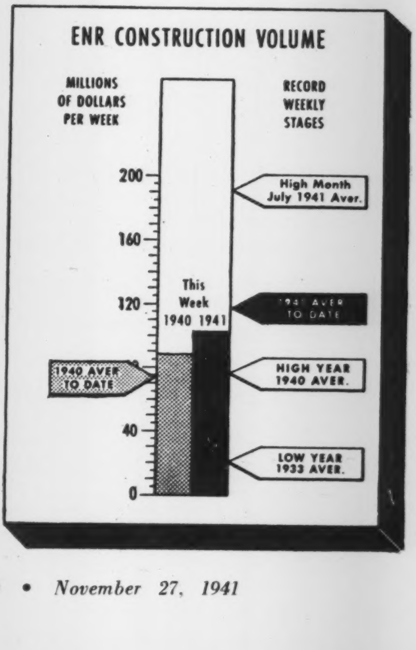
Public construction, up 49 percent compared with a year ago, is responsible for the increase, as private awards decline 21 percent from the 1940 week's volume. Federal work tops last year by 169 percent, but state and municipal construction is 62 percent lower.

The current week's awards bring 1941 construction to $5,599,010,000, a gain of 56 percent over the total for the 48-week period last year. Private construction, $1,130,130,000, is 6 percent higher than in the 1940 period, and public work is 77 percent higher due to the 171 percent increase in federal awards.

In the classified construction groups, all classes of work except earthwork and drainage record gains over their respective totals in the short preceding week. Comparisons with the 1940 week reveal increases in waterworks, bridges, commercial and public buildings, and unclassified construction.

New capital for construction purposes for the week totals $23,928,000, an increase of 136 percent over the volume for the corresponding week last year. The current week's financing is made up of $5,750,000 in corporate security issues, $3,367,000 in state and municipal bond sales, $14,661,000 in RFC loans for industrial plant expansion, and $150,000 in RFC loans for public improvements.

New construction financing for the year to date, $6,282,297,000, is 74 percent higher than the $3,610,990,000 reported for the 48-week period last year.



CONTRACTS

(Thousands of dollars)

	Week Ending Nov. 28 1940	Nov. 20 1941	Nov. 27 1941
Federal	$27,411	$36,875	$73,648
State & Municipal	29,514	12,242	11,099
Total public...	$56,925	$49,117	$84,747
Total private..	32,378	14,983	25,584
TOTALS	$89,303	$64,100	$110,331

Cumulative
1941......(48 weeks).....$5,599,010
1940......(48 weeks).....$3,588,539

Note: Minimum size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1940 48 weeks	1941 48 weeks
NON-FEDERAL	$1,329,029	$1,331,179
Corp. Securities....	226,640	352,869
State & Mun.......	463,781	399,569
U.S.H.A. loans	218,704	30,399
R.F.C. loans.......	195,904	284,842
R.E.A. loans.......	40,000	100,500
Federal Aid—Hwy..	184,000	163,000
FEDERAL	$2,281,961	$4,951,118
TOTAL CAPITAL....	$3,610,990	$6,282,297

FHA MORTGAGES

	Week Ending Nov. 23 1940	Nov. 15 1941	Nov. 22 1941
Selected for appraisal ... (Titles II and VI)	$18,786	$19,991	$20,256*

Cumulative
1941.....(47 weeks).....$1,307,470*
1940.....(47 weeks).....$1,165,931

* Subject to revision.

ENR INDEX NUMBERS

Index Base = 100		1913	1926
Construction Cost...	Nov. '41..	266.13	127.93
Building Cost......	Nov. '41..	216.54	117.05
Volume	Oct. '41..	263	115

CONTRACT UNIT PRICES

What contractors are bidding on different kinds of construction work

ACCESS ROAD, YPSILANTI, MICHIGAN

OWNER: Michigan State Highway Dept., Lansing, in cooperation with the Defense Public Works Agency.

PROJECT: Construction of access road for U. S. Army Bomber Plant near Ypsilanti, Van Buren Township, Wayne County, Mich. Commences at point on south side of Existing M-17 (Ecorse Rd.) about 127-ft. south of intersection of M-17 and M-56 (Belleville Rd.), then west along south side of present M-17 to point on west county line, north of the bomber plant. Type of work: 42-ft. grade; grading and drainage structures: and 22-ft. concrete pavement, 9-in. uniform, not reinforced. Approximate length, 3 miles.

CONDITIONS: Contractor to furnish all materials and complete work by January 1, 1942. The speed with which the work must be performed necessitates winter construction. Cold weather protection for pavement concrete includes calcium chloride admixture, heating aggregates and mixing water, paper blanket covering, and straw or hay covering. Rail and highway transportation facilities available. Wage rates specified as minimums are: skilled labor, \$1.37½ to \$1.62½ per hr.; intermediate labor, 90 to 92½c.; and unskilled labor, 60 to 80c. per hr.

BIDS: Six bids were opened October 18, 1941, ranging from the low of \$236,807 to \$324,299.

LIST OF BIDDERS:

1. Bridgeport Core Sand Co., and Thomas McNally, Saginaw, Mich. (contract)	\$236,807
2. Cooke Contracting Co., Detroit, Mich.	278,481
3. Lewis & Frisinger Co., and E. B. Schwaderer, Ann Arbor, Mich.	287,292
4. Loselle Constr. Co., Wyandotte, Mich.	311,071
5. L. A. Davidson, Lansing, Mich.	315,197
6. Denton Constr. Co., Detroit, Mich.	324,299

Item	Quan.	Unit Prices (1)	(2)	(3)
1. Clearing	4.02 ac.	\$100.00	\$100.00	\$100.00
2. Grubbing	505 s. rd.	.75	1.00	1.00
3. Remove trees 8 to 12-in. dia.	11 ea.	10.00	10.00	10.00
4. Remove trees 13 to 24-in. dia.	22 ea.	15.00	15.00	15.00
5. Remove trees 25 to 36-in. dia.	12 ea.	25.00	25.00	30.00
6. Remove old pavement	718 s. y.	.30	1.00	.30
7. Remove masonry and concrete	400 c. y.	3.00	3.00	3.00
8. Earth excavation	155,254 c. y.	.20	.27	.30
9. Overhaul	376,825 c. y. mi.	.09	.10	.12
10. Trim and finish earth grade (service road)	48.4 sta.	10.00	10.00	5.00
11. Trim and finish earth grade	163.41 sta.	10.00	10.00	5.00
12. Grade A concrete	609.3 c. y.	21.00	25.00	30.00
13. Steel reinforcement	20,355 lb.	.06	.06	.10
14. Heat and house concrete	609.3 c. y.	3.00	5.00	3.00
15. 12-in. Cl. A culverts	723 l. f.	1.20	1.25	1.25
16. 12-in. Cl. B culverts	57 l. f.	1.20	1.50	1.25
17. 18-in. Cl. B culverts	160 l. f.	2.25	2.00	2.00
18. 24-in. Cl. B culverts	28 l. f.	3.00	3.00	3.00
19. 30-in. Cl. B culverts	204 l. f.	5.00	5.00	3.50
20. 12-in. sewer	274 l. f.	1.10	1.50	1.10
21. 6-in edgedrain sewer	2,000 l. f.	.50	.50	.75
22. Catch basin, type 3E	1 ea.	75.00	75.00	75.00
23. Catch basin, type 5E	1 ea.	60.00	65.00	75.00
24. Catch basin, type 6D	1 ea.	60.00	65.00	75.00
25. Reconstr. catch basin, Cover A	1 ea.	35.00	40.00	20.00
26. Fine grading and cleanup	163.41 sta.	6.00	10.00	15.00
27. Fine grading and cleanup (service road)	48.4 sta.	6.00	10.00	15.00
28. Concrete pavement, 9-in. uniform	38,141.8 s. y.	2.25	2.80	2.80
29. Concrete pavement, 7-in. uniform	5,483.4 s. y.	2.00	2.55	2.40
30. Steel tie bars, ½-in. dia.	15,217 lb.	.06	.06	.05
31. Hay or straw	300 ton	15.00	12.00	16.00
32. Stab. aggregate surf., plant mix, 5-in. comp.	11,828 s. y.	.50	.40	.40
33. Heat aggregates and mixing water	43,625 s. y.	.20	.10	.15
34. Calcium chloride, admixed	4 ton	25.00	25.00	25.00
35. Calcium chloride (dry powder)	58.2 ton	25.00	25.00	25.00
36. Concrete curve header	120 l. f.	1.25	1.50	1.00
37. Aggregate approach (loose meas.)	1,119 c. y.	1.75	2.50	1.00
38. Gravel shoulders, 4-in. compacted	37,208 s. y.	.28	.30	.25
39. Topsoil surface (loose meas.)	15,000 c. y.	.35	.50	.30
40. Bitum. approach mixture	663.9 ton	7.50	6.00	8.00
41. Plain riprap	24 c. y.	4.00	10.00	6.00
42. Guard posts	18 ea.	1.50	1.50	2.00
43. Conc. rt.-of-way markers	24 ea.	5.00	5.00	4.00
44. Maintain traffic (1 intersection)	1 ea.	500.00	300.00	100.00
45. Bridge over pavement	3 ea.	75.00	[illegible]	100.00
46. Moving fence	200 rd.	.70	.50	1.00
47. Mulching	98 ton	14.00	14.00	10.00
48. Fertilizer	9,750 lb.	.05	.05	.05
49. Class B seeding	32.5 ac.	50.00	[illegible]	25.00

HIGHWAYS, WYOMING

OWNER: Wyoming State Highway Commission, Cheyenne.

PROJECT: Grading, drainage, base course surfacing, oil treatment by road-mix method, three timber trestle bridges, two reinforced concrete culverts, and miscellaneous work on 6.461 miles of the Cody-South Fork Road in Park County in northwestern Wyoming. Roadway to be 26-ft. wide. Top portion of subgrade to be constructed of pit run gravel, thickness to be 6 and 12-in. Base course 1½-in., oil treated gravel to be 1½-in.

CONDITIONS: Contractor to furnish all materials and complete work in 120 working days. One portion of road through solid rock, and sulphur deposits may be encountered in another section. Passes through an intensely irrigated section, and also a swampy area, necessitating many drainage and irrigation structures. Rail and highway transportation facilities available. Wage rates are: skilled labor, 80c. to \$1.12½ per hr.; semi-skilled, 65c.; and common, 55c.

BIDS: Two bids were received September 16, 1941, the contract low of \$157,703, and \$160,335.

LIST OF BIDDERS:

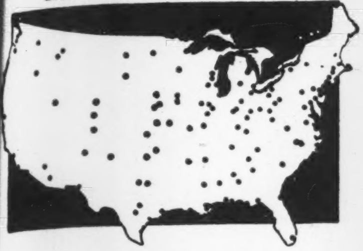
1. Taggart Construction Co., Cody, Wyo. (contract)	\$157,703
2. Northwestern Engineering Co., Rapid City, S. D.	160,335

Item	Quan.	Unit Prices (1)	(2)
1. Excavation	239,500 c. y.	\$0.24	\$0.245
2. Watering (embankment)	3,000 M gal.	1.00	2.00
3. Sheep's foot roller operation	900 hr.	2.25	3.00
4. Pneumatic-tired roller operation	650 hr.	2.50	3.25
5. Overhaul	45,500 c. y. sta.	.015	.015
6. Haul	117,500 c. y. mi.	.17	.12
7. Excavation for pipe culverts	700 c. y.	1.00	1.00
8. Stone for drains	60 c. y.	1.00	5.00
9. Excavation for drains	60 c. y.	1.50	1.50
10. 6-in. perf. corr. metal pipe	300 l. f.	1.00	1.20
11. 18-in. corr. metal pipe	1,534 l. f.	1.95	2.00
12. 24-in. corr. metal pipe	568 l. f.	3.00	3.00
13. 30-in. corr. metal pipe	172 l. f.	3.70	3.65
14. 36-in. corr. metal pipe	300 l. f.	5.40	6.00
15. 42-in. corr. metal pipe	60 l. f.	6.90	7.00
16. 48-in. corr. metal pipe	194 l. f.	8.00	9.00
17. 60-in. corr. metal pipe	88 l. f.	13.00	11.00
18. 72-in. corr. metal pipe	100 l. f.	15.00	17.00
19. 18-in. vitrified clay pipe	303 l. f.	2.20	1.90
20. 24-in. vitrified clay pipe	39 l. f.	3.50	2.50
21. 22x13-in. corr. metal pipe arch culvert	98 l. f.	2.20	5.00
22. 30x17-in. corr. metal pipe arch culvert	54 l. f.	3.40	6.00
23. 44x25-in. corr. metal pipe arch culvert	64 l. f.	6.25	9.00
24. Mechanical tamping	570 hr.	2.00	2.50
25. Class I riprap	555 c. y.	5.00	3.50
26. Class A concrete	151.4 c. y.	23.00	24.00
27. Reinforcing steel	11,190 lb.	.10	.08
28. Trash racks	2 ea.	20.00	30.00
29. Right-of-way markers	27 ea.	5.00	5.00
30. Rein. concrete project markers	2 ea.	20.00	20.00
31. Structure excavation	580 c. y.	1.35	1.80
32. Grouted riprap	25 c. y.	7.00	16.00
33. Remove existing structures	L. S.	100.00	616.90
34. Guide posts	44 ea.	2.25	2.00
35. Cr. gravel surfacing (¾-in. max.)	6,750 ton	.85	.80
36. Cr. gravel base crse. (1-in. max.)	7,300 ton	.75	.80
37. M. C. liquid asph. dist. MC-3	291 ton	18.00	22.00
38. Base treatment, MC-0	155 ton	18.00	22.00
39. Seal coat, RC-2	103 ton	18.00	25.00
40. Processing roadway	89,000 s. y.	.06	.06
41. Sand	100 ton	1.00	2.00
42. Watering (base)	260 M gal.	1.00	2.00
43. Roller operation, base	130 hr.	3.00	3.50
44. Treated timber	69,07 M b. m.	150.00	135.00
45. Untreated timber	1.793 M b.m.	150.00	135.00
46. Treated timber piling	1,984 l. f.	1.25	1.50
47. Pile shoes	20 ea.	5.00	6.00
48. Dry excavation for bridges	10 c. y.	4.00	2.00
49. Wet excavation for bridges	190 c. y.	6.00	4.00
50. Class B concrete	27.7 c. y.	20.00	30.00
51. Old road obliteration	0.2 mi.	100.00	200.00
52. Standard right-of-way fence	68,000 l. f.	.075	.05
53. End panels	85 ea.	7.00	7.00
54. Brace panels	165 ea.	4.00	5.00
55. Remove and reset telephone line	1.8 mi.	100.00	100.00
56. 16-ft. telephone poles	15 ea.	1.50	10.00
7. 30-ft. telephone poles	4 ea.	2.00	15.00

CONSTRUCTION REPORTS

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York
ELSIE EAVES, Manager *SCOTT McLEOD, Statistician*
(Daily service also available—Write for details)

Location of ENR Correspondents



Symbols and Abbreviations Include:

Federal Government
Project of $500,000 or over
ENR Engineering News-Record
CD Engineering News-Record Construction Daily

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Named in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges, Grade Cross'gs
Streets & Roads
Earthwork, Waterways
Unclassified
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings

Stages Reported

PROPOSED: (except Streets & Roads):

BIDS ASKED (new announcements only. For full calendar, see also preceding issues of ENR);

LOW BIDDERS: All low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

WATER SUPPLY

PROPOSED WORK

†Calif., Fort Ord—Con. Q.M., developing supplemental water supply sys., wells, reservoir, pipelines, pump house, electrical equip., etc. $250,000. H. Forbes, Humboldt Bank Bldg., San Francisco, engr.

★ **†Conn., Waterbury** — City, reservoir and dam, Docket Conn. 6-101. $1,000,000. **DPW.**

Ill., Aledo—Installing water softening equip. at city WW. $30,000-$40,000. Stanley Eng. Co., Muscatine, Ia., engrs.

†Ky., Elizabethtown—City, water sys. extens., imprvs., addns., Docket Ky. 15-117. $93,362. **DPW.**

La., Benton—Bossier Parish Police Jury, c/o D. W. Brownlee, secy., Benton, WW and sewerage sys. near Bossier City. $200,000. Applied for DPW funds. R. L. Tatum, Levy Bldg., Shreveport, engr.

★ **†Me., Portland**—City of Portland Water Dist., Casco St., 2,300 ft. 12 in. steel submarine water mains to Falmouth, 1,200 ft. 12 in. steel pipe and 8,600 ft. 8 in. to connect Mackwith Island and Great Diamond Island, 600 ft. 8 in. to Little Diamond Island, 3,000 ft. 8 in. from Little Diamond Island to Peaks Island. **DPW.** 17-134. $523,636.

Mass., Chicopee — Water Dpt., City Hall, watermains. $320,000. Hayden, Harding & Buchanan, 622 Park Square Bldg., Boston, engrs.

★ **†Mich., Warren** — Warren Twp., making plans water distr. sys. addns., Docket Mich. 20-118. $892,800. **DPW.** Hugh R. O'Mara & C. P. McGrath, 1st Natl. Bank Bldg., Mt. Clemens, engrs. CD 11/7—ENR 11/13.

†Miss., Petal—Forrest County, acting for unincorporated Village of Petal, WW and sewerage sys., Docket Miss 22-140. $110,000. **DPW.**

N. Y., Binghamton—Pump. sta. $30,000. J. A. Giles, City Hall, engr.

N. Y., Granville—WW supply sys. $50,000. R. S. Hall, Delmar, engr.

N. C., Lenoir—Imprv. WW sys. $15,000-$20,000. M. Williams, city engr.

★ **Okla., Choteau**—H. V. Grant, mayor, water and sewerage sys. $500,000. Applied to DPW.

†Ore., Hermiston—City, bids soon, well, 400 gpm deep well pump, exten. 35,000 ft. 4- to 8-in. steel distr. sys., Docket Ore. 35-116. $96,134. **DPW.** R. H. Corey, Bedell Bldg., Portland, engr. CD 9/23—ENR 9/25.

Pa., Allentown—G. W. Kistler, city clk., exten. 6 and 8 in. c.i. watermains into Alton Park and Salisbury Twp. sects., new 8 in. main S. Wood, S. 11 and Sidney Sts. $50,000. E. Meckley, city engr.

Pa., Emmaus—Boro Council, exten. water supply main from boro limits to Park sect. $15,000-$20,000.

Pa., Large—Bd. Comrs. Jefferson Twp., W. W. Eggers, secy., Twp. Hall, Large, water sys., pump. sta., filtration facilities, Jefferson Twp. Chester Engineers, 210 E Parkway, NS Pittsburgh, engrs.

†Pa., Shaler—Shaler Twp., Allegheny Co., county WW sys. addns., enlargements, imprvs., Docket Pa. 36-155. $32,000. **DPW.**

†S. C., Spartanburg—City, Comrs. P. Wks., replacing mains and exten. water distr. sys., Docket S.C. 38-116. $220,000. **DPW.**

Tex., Alvin — L. Merchant, mayor, WW exten. $35,000. Applied for DPW funds. Hedrick & Lindsley, 818 Southern Standard Bldg., Houston, engrs. CD 9/26—ENR 10/2.

†Tex., Brownwood—City, city water distr. sys. addns., extens., imprvs., Tex. 41-116. $286,000. **DPW.**

Tex., Paris—J. M. Crook, mayor, WW imprvs., water treatment plant, etc. $367,000. Applied for DPW funds. W. F. Hicks, city engr. Rollins & Forrest, 817 Praetorian Bldg., Dallas, consult. engrs.

Tex., Redwater—H. E. Hanks, mayor, water supply, sewage disposal plant. $249,117. Applied for DPW funds. Beavers, Lodal & Wells, 1411 Smith-Young Tower, San Antonio, engrs.

†Alaska, Anchorage — City, water supply sys., 20 ft. high diversion dam, infiltration sys., 45,000 ft. transite pipe, 150,000 gal. elevated tank, Docket 50-115. $265,000. **DPW.** Parker & Hill, Smith Tower, Seattle, Wash., engrs. CD 11/3——ENR 11/6.

BIDS ASKED

Bids Asked November 28

†La., Camp Livingston — Con. Q.M., Camp Livingston, water supply works and purification plant at and in vicinity Camp Livingston; adv. ENR 11/27. Extended date. CD 11/12.

Bids Asked December 1

Md., Towson—Comrs. Baltimore Co., Court House, Towson, WW, in Essex.

Bids Asked December 3

Conn., Groton—Boro, A. N. Tiffany, supt. Water Dpt., 359 Thames St., water sys., Conn 6-103, watermain, reservoir, valve chambers, hydrants, etc. $104,400. Metcalf & Eddy, 1300 Statler Bldg., Boston, Mass., engrs.

†Ill., Peoria — Dpt. Agriculture, Div. Purchase, Sales & Traffic, The Mall, 12 to 14 Sts. S.W., Wash., D. C., water supply sys. for fermentation fuels pilot plant, Northern Regional Research Laboratory.

Bids Asked December 5

†Ala., Florence—City, water filtration and purification plant addns., imprvs. Docket Ala. 1-145. $75,000. **DPW.** J. W. Goodwin Eng. Co., Martin Bldg., Birmingham, engrs. CD 10/8—ENR 10/16.

Bids Asked December 6

Tex., Weatherford—C. F. Russell, mayor, furnishing WW. chlorinators, etc. S. M. Field, city engr.

Bids Asked December 9

†Md., Edgewood—Pub. Bldgs. Admin., 7 and D Sts. S.W., Wash., D. C., water treatment plant, etc., Edgewood Arsenal; adv. ENR 11/27.

Bids Asked December 10

†Tex., Weatherford — City, C. F. Russell, mayor, water and sewer imprvs., Tex. 41-184. $58,700. **DPW.** CD 9/26—ENR 10/2.

Bids Asked About February 1

Pa., Wyomissing — Boro Council, 1 m.g. water supply reservoir, on hill between Wyoming and Forest Aves., pump house, 320 gpm pump. and equip. Over $15,000. I. Hafer, c/o owner, engr. CD 7/16—ENR 7/24.

LOW BIDDERS

Calif., San Francisco—Public Utilities Comn., City Hall, Nov. 12, Baden pump. sta., San Mateo Co., Water Dpt. Contr. 314, at Baden, for City and San Francisco Co., from M. J. Lynch, Barneveld and Oakdale Aves. **$51,617.** CD 10/24—ENR 10/30.

†Mo., Rolla—Defense Pub. Wks. Div., FWA, 406 W. 34 St., Kansas City, Mo., Nov. 14, Sect. 1, deep well, deep well pump, from Layne Western Co., BMA Bldg., Kansas City, Mo., **$9,357;** elevated steel tank, tower, from Pittsburgh Des Moines Steel Co., 1015 Seattle St., Des Moines, Ia. **$15,250. DPW.** CD 11/7.

Okla., Oklahoma City—E. Simon, city clk., Nov. 12, exten., altering water purification plant, from S. Pennington, 2616 NW 27 St. **$226,000.** Est. $194,300. CD 11/6—ENR 10/23.

†Tex., Palacios—City, c/o B. F. Belknap, city secy., Nov. 14, WW sys., imprvs., Tex. 41-104, from W. G. Cullum & Co., Great Natl. Life Bldg., Dallas. **$87,946.** Est. $120,000. **DPW.** CD 11/3—ENR 11/6.

CONTRACTS AWARDED

Ark., Malvern—WW sys. imprvs., sewers, **WPA. $67,772.** Dickinson & White, Rector Bldg., Little Rock, engrs. CD 2/19—ENR 2/27.

★ **†Fla., Key West**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., installation 145 mi. 18 in. fresh water pipe line from Florida Mainland to Key West, to Williams Bros. Corp., Natl. Bank Tulsa Bldg., Tulsa, Okla. Est. **$1,000,000.** CD 7/16—ENR 7/17.

Kan., Newton — City, c/o N. Daugherty, Contr. 5, pipeline work, miscellaneous plant changes, installation pipe, to Rhoads Constr. Co., Newton. **$18,160.**

†Minn., St. Paul—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., 2,500,000 gpd. water softening and iron removing plant at Twin City Ordnance plant, to The Refinite Corp., 1023 Harney St., Omaha, Neb. **$59,636.** Bids 11/3.

N. J., Keansburg—Boro Hall, rebuilding 2 pumps and wells, drilling new well, Water Plant, to Layne Well Sys., Ltd., 101 Cedar St., New York, N. Y. **$49,500.** CD 10/16—ENR 10/23.

N. J., Newark—Water Dpt., City Hall Annex, sheeting, watermains, Milford and Waverly Aves. **WPA. $33,450.** W. Banks, city engr. CD 10/31—ENR 11/6.

N. Y., Chittenango—Well water sys., to H. H. Cranston, Fredonia. Est. over **$15,000.**

N. Y., Middleport—Village Bd., N. Walters, mayor, drilling wells for addnl. water supply, to H. H. Cranston & Son, Fredonia. Est. **$15,000.**

N. Y., New York—Dpt. Water Supply, Gas & Electricity, Municipality retaining walls, access bldg., old Croton Aqueduct, Burnside Ave. between University and Harrison Aves. **WPA. $51,434.** W. W. Johnstone, 70 Columbus Ave., dir. Div. Operations.

Tex., Dallas — Waterline exten., imprvs. **WPA.** Approx. **$43,671.**

†Tex., Galveston — City, c/o B. Harris, mayor, Sect. 1 WW sys., Tex. 41-133, to Layne-Texas Co., 6931 Harrisburg Rd., Houston. **$104,330. DPW.** CD 10/28—ENR 10/30.

†Tex., Victoria—U. S. Eng., Federal Bldg., Galveston, aeration and lime treatment plant for water sys., to Alamo Constr. Co., c/o Smith-Young Tower Bldg., San Antonio. **$17,268.** Bids 11/7. CD 11/5.

★ **†Va., Newport News**—City, filtration plant, transmission mains, etc., to Bass Eng. & Constr. Co., 2832 E. Grand Blvd., Detroit, Mich. **$988,000. DPW.** Bids 11/5. CD 11/11—ENR 11/13.

SEWERS WASTE DISPOSAL

PROPOSED WORK

Calif., Los Angeles—Los Angeles Co., sanitary sewer 166 St., etc. C.I.N.-1050 $56,199. A. Jones, Hall of Records, engr.

†Fla., Orlando—City, W. Beardall mayor, incinerator and stockade, Winter Garden Rd. Over $200,000. **DPW.** Associated Architects, 6 West Church St., archts. A. E. Herndon, City Hall, engr. CD 10/24—ENR 10/27.

SEWERS, etc. (Proposed Work, Cont'd.)

†Ga., Savannah—City, exten., imprv. sewerage sys. $162,500. **DPW.** CD 12/18—ENR 12/26.

†Ind., Jeffersonville—Jeffersonville, Clarksville and Claysburg Sanitary Dist., sanitary sewers, sewage treatment plant, incinerator, Docket Ind. 12-138. $654,186. **DPW.**

†Ky., Elizabethtown—City, exten. sewerage sys., sewage treatment plant, Docket Ky. 15-119. $52,716. **DPW.**

La., Glenmora—W. B. Graves, mayor, sanitary sewerage sys., exten. WW sys. $320,775. Applied for DPW funds. F. P. Joseph, Glenmora and H. B. L'Heureux, 412 Guaranty Bldg., Alexandria, engrs.

La., Pollock—R. A. Walker, mayor, sewerage and sewage disposal plant. $71,860. Applied for DPW funds. H. B. L'Heureux, 412 Guaranty Bldg., Alexandria, engr.

†Me., Kittery—U. S. Navy Dpt., Portsmouth, sewerage treatment plant, Docket Me. 17-124. $125,000. **DPW.** CD 8/8—ENR 8/14.

†Md., Rockville—Washington Suburban Sanitary Comn., exten. sewerage sys. to serve Forest Glen Housing. Docket Md. 18-150. $51,870. **DPW.**

†Mich., Battle Creek—City, making plans sewerage sys. and sewage treatment plant. Docket Mich. 20-104. $302,500. **DPW.** H. P. Jones & Co., 606 2nd Natl. Bank Bldg., Toledo, O., engrs. CD 11/7—ENR 11/13.

†Mich., Roseville—Village, preparing plans sewerage sys. to connect with Detroit disposal plant, Docket Mich. 20-130. $462,000. **DPW.** Hubbell, Roth & Clark, 2640 Buhl Bldg., Detroit, engrs.

★**†Mich., Royal Oak**—Oakland Co., County Bldg., Pontiac, sewerage sys. to serve southern Oakland Co., incl. interceptor sewer. **DPW** 20-167. $812,000. Hubbell, Roth & Clark, Buhl Bldg., Detroit, engrs. CD 9/9—ENR 9/11.

★**†Mich., Warren** — Warren Twp., making plans sewerage sys., Docket Mich. 20-117. $1,825,352. **DPW.** Hugh R. O'Mara & C. P. McGrath, 1st Natl. Bank Bldg., Mt. Clemens, engrs. CD 11/7—ENR 11/13.

Mo., St. Louis County—Hanley-Page East Sewer Dist. of St. Louis Co., voted $50,000 bonds, sanitary sewerage sys. $203,000. Applied for DPW grant. E. A. Fulton, 3 S. Meramec Ave., Clayton, St. Louis, engr. CD 11/3—ENR 11/6.

★**†Miss., Biloxi**—City, sewers and WW. $1,263,000. **DPW.** Bradford, Collins, Dacey & Collins, Biloxi, engrs. CD 10/8—ENR 10/16.

N. Y., Flushing—President Queens Boro, 120-55 Queens Blvd., Kew Gardens, storm and sanitary sewers, Avery Ave. $75,000.

N. Y., Laurelton—President Queens Boro, 120-55 Queens Blvd., Kew Gardens, storm and sanitary sewer 152 Ave. from 123 to 124 St. $36,000.

N. Y., Springfield Gardens — President Queens Boro, 120-55 Queens Blvd., Kew Gardens, combined trunk sewer 137 Ave., $49,000; storm sewer, 122 Ave., $50,000; combined trunk sewer, 225 St., $28,000, all Queens Boro..

★**†N. C., Fayetteville** — City voted $375,000 bonds, sewage disposal plant. Total cost $791,000: **DPW.** CD 10/27—ENR 10/30.

O., Salem — Second half South Broadway storm sewer project. $60,000. F. S. Barckhoff, city engr.

Okla., Tulsa—C. H. Veale, mayor, sanitary sewers. $264,000. W. R. Wooten, city engr.

Ore., Springfield—Sewage disposal plant sys. $250,000. WPA funds sought. R. H. Corey, 4004 S. W. Greenleaf Dr., Portland, engr. CD 11/14—ENR 11/20.

Pa., Erie—M. J. Henry, city clk., exten. storm sewers, Walnut and Plum Sts., culvert between Walnut and Cherry Sts., storm drain, Poplar St. $300,000. C. Pulling, deputy city engr.

Pa., Wilkes-Barre—L. K. Eldridge, city clk., Mill Creek outfall sewer into Susquehanna River, 1st Ward. Over $25,000. G. B. Walker, city engr.

†R. I., Newport—Pub. Wks. Officer, Naval Training Station, Newport, bids soon refuse incinerator, Spec. 10768.

Utah, Ogden—Complete sewerage sys., North Ogden, repairing existing WW sys. $275,000. Applied for DPW funds.

†Va., Hampton—Elizabeth City Co., sewerage sys. addns. and extens. Docket Va. 44-227. $158,000. **DPW.**

†Wash., Bremerton—City, bids soon, 2 story part bsmnt., 50 x 102 ft. rein.-con. incinerator. Docket Wash. 45-126. $92,400. **DPW.** F. A. Naramore & Assoc., Dexter Horton Bldg., Seattle, archts. CD 10/7—ENR 10/9.

†Alaska, Sitka—City, bids soon exten. sewerage sys., Docket 50-103 and 50-107. $59,000. **DPW.** Burns & McDonnell Eng. Co., 107 W. Linwood Ave., **Kansas City, Mo., engrs.**

BIDS ASKED

Bids Asked November 28

†Ill., Proving Ground—Con. Q.M., Savanna Ordnance Depot, intercepting sewers, sewage treatment plant; adv. ENR 11/27.

Bids Asked December 2

Pa., Allentown—G. W. Kistler, city clk., sanitary sewers, newly created Sewer Dist. 26, 12 Ward. $70,000. Tentative date. E. Meckley, city engr. CD 10/8—ENR 10/16.

Bids Asked December 3

N. Y., New York—President Bronx Boro, Bronx County Bldg., 851 Grand Concourse, sewer, appurtenances, Giegerich Pl., Viele and Calhoun Aves.

Bids Asked December 4

La., New Orleans—Sewerage and Water Bd., Contr. 13-S, furnishing, laying 400 lin. ft. 8 in. concrete sewers, 245,000 lb. deformed reinforcing steel.

†Tex., Goose Creek—City, c/o E. Flowers, city atty., sanitary sewers, Tex. 41-113. $144,160. **DPW.** B. B. Williams, city engr. C. P. Smith, Orange, consult. engr. CD 10/29—ENR 11/6.

Bids Asked December 5

†Tex., Palacios—City, c/o B. T. Belknap, city secy., sewerage sys. imprvs., extens., additional sewers, pump house, sewage disposal plant. Tex. 41-103. $78,463. **DPW.** Extended date. J. Montgomery, Littlefield Bldg., Austin, engr. CD 11/13—ENR 11/6.

Bids Asked December 9

Calif., Salinas—Directors Alisal Sanitary Dist., 627 E. Alisal St., 20,500 lin. ft. 18 in. rein.-con. outfall sewer, appurtenances. C. C. Kennedy, 604 Mission St., San Francisco, engr.

La., Monroe—At office City Treasurer, City Hall, furnishing, laying 195 ft. 60 in. corrugated iron pipe, etc. in connection work storm sewer outlet; sewage pump, pump pit and brick motor bldg. in connection with emergency sanitary pump. station. W. I. Neel, Monroe, engr.

†R. I., Quonset Point—Construction Officer, Naval Air Base, Quonset Point, incinerator, Spec. 10733.

Bids Asked December 10

Calif., Niles—C. H. Purcell, engr. State Hy. Dpt., Sacramento, storm drain across State Route 5 and through Niles.

LOW BIDDERS

†Calif., Santa Ana—U. S. Eng., 751 S. Figueroa St., Los Angeles, Nov. 17, outfall sewer, Air Corps Replacement Center, Inv. 126, from R. A. Wattson, 1026 N. McCadden Pl., Los Angeles. **$42,188.** CD 11/11.

†Md., Edgewood—Con. Q.M., Edgewood Arsenal, Nov. 21, outfall sewer, etc. for defense housing, Edgewood Arsenal from Leo Butler Co., 8416 Georgia Ave., Silver Springs. **$33,765.** CD 11/19.

†Mo., Rolla—Defense Pub. Wks. Div. FWA, Porter Bldg., Kansas City, Mo., Nov. 14, complete sewage treatment plant, from Don. P. Pray, Monette. **$114,100.** Est. $300,000. CD 11/7.

†Mo., Waynesville—Defense Pub. Wks. Div., FWA., Porter Bldg., Kansas City, Mo., Nov. 14, complete sewage treatment plant, from Don P. Pray, Monette. **$97,500.** CD 11/17.

N. J., Maywood—Boro, Boro Hall, Nov. 12, sewage disposal plant alterations, addns., 1,800 ft. trunk sewer, from J. P. Burns, Knickerbocker Rd., Cresshill, **$276,450.** CD 10/27—ENR 10/30.

N. Y., Kew Gardens—President Queens Boro, Queens Boro Hall, Nov. 17, combined sewer, 21 St. etc., from T & T Contg. Co., 1066 60 St., Brooklyn, **$102,434**; N. Conduit Ave., from Paino Constr. Co., 32 Court St., Brooklyn. **$45,851.** CD 11/6—ENR 11/13.

†Tex., Waco—U. S. Eng., Federal Bldg., Galveston, Nov. 15, aerator type sewage treatment plant, at U. S. Army Airfield, from E. B. Snead, 1507 Northwood Rd., Austin. **$64,800.** CD 11/11.

CONTRACTS AWARDED

Calif., San Luis Obispo—Sewage disposal plant, to F. C. Stolte, 203 Pine St., Pacific Grove. **$118,100.** Bids 11/17. CD 11/6.

†D. C., Wash.—U. S. Eng., 1 and Douglas Sts. N.W., sanitary sewer, **gas**, **watermains** to Engineer Reproduction Plant and storage warehouse, Dalecarlia Reservation, Montgomery Co., Md., to Leo Butler Co., 8416 Georgia Ave., Silver Springs, Md., **$27,157.** Bids 10/28. CD 10/21—ENR 10/23.

Ia., Sidney—Sewage disposal plant, **WPA. $121,480.**

N. J., East Orange—12, 15, and 18 in. storm sewers, manholes, catchbasins, etc., Warwick St., Girard, 4 and Glenwood Aves., **WPA. $61,710.** W. Willegarod, town engr. CD 11/11—ENR 11/13.

N. J., Newark—Sheeting, sewer, Ave. A, **WPA. $261,541.** J. Costello, city engr. CD 10/27—ENR 10/30.

N. J., Stirling—Passaic Twp., Twp. Hall, 5 and 8 in. vitr. tile sewers, area tributary to Main Ave. and Passaic Valley Rd., **WPA. $57,034.** C. Malstrom, Orange and N. 6 St., Newark, WPA engr. CD 10/28—ENR 10/30.

N. J., Trenton — State Dpt. Institutes & Agencies, State House, imprv. grounds, sewage disposal facilities, water sys., water lines, etc., North Jersey Training School, Totowa. **WPA. $52,435.** CD 11/11—ENR 11/13.

N. Y., Brooklyn—President Brooklyn Boro, Boro Hall, storm and sanitary sewers, appurtenances, 3 locations. **WPA. $60,424.** W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., Kew Gardens—President Queens Boro, 120-55 Queens Blvd., catch basins, inlets, seepage basins, appurtenances. **WPA. $95,427.** W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., New York—President Bronx Boro, 851 Grand Concourse, reconstructing combined sanitary-storm sewers. **WPA. $251,889.** W. W. Johnstone, 70 Columbus Ave., dir. Div. Operations.

N. Y., New York — President Manhattan Boro, Municipal Bldg., replacing brick and c.i. with arch type concrete sewers. **WPA. $207,646.** W. W. Johnstone, 70 Columbus Ave., dir. Div. Operations.

N. Y., Rockaway Beach (Sta. **Far Rockaway**)—President Queens Boro, 120-55 Queens Blvd., Kew Gardens, corrugated iron storm sewer drains, appurtenances, Beach 12 St. and Beach Channel Dr., Rockaway Beach Blvd. **WPA. $144,187.** W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., St. George—President Richmond Boro, Boro Hall, sanitary sewers, Nugent Ave., Norway Ave. to Quintard St. **WPA. $112,606.** W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., Syracuse—Dpt. P. Wks., City Hall, rehabilitation main sewage disposal and garbage reduction plants, Hiawatha Blvd. and Butternut Creek, **WPA. $50,00.** N. Pitts, city engr.

Pa., Erie—M. J. Henry, city clk., 2,500 lin. ft. 39 and 42 in. rein.-con. storm water sewers, Buffalo Rd. and Camphausen Sts. **WPA. $55,000.** C. K. Pulling, deputy city engr.

Tex., Dallas—Sanitary sewer lines exten., imprvs. **WPA.** Approx. **$68,419.**

Tex., Denison — Installing sanitary sewer lines. **WPA.** Approx. **$110,000.** A. M. Breneke, city engr.

Tex., Houston—Sanitary sewer line replacements, day labor. **$65,000.**

Sask., Davidson—Dpt. National Defense for Air, Ottawa, Ont., sewer and water services, Elementary Flying Training School, to Henry **Borger & Son, Ltd., 194 Osborne St.,** Winnipeg, **Man., $72,000.**

BRIDGES GRADE CROSSINGS

PROPOSED WORK

Ill., Kankakee—State Dpt. P. Wks. Bldgs., Div. Hys., Springfield, reconstruction or replacing viaduct at intersection Court St. (St. Routes 25 plus 17) with tracks of Illinois Central R.R. M. J. Fleming, Centennial Bldg., Springfield, acting ch. hy. engr.

★**Mo., Kansas City**—A. C. Everham, dir. P. Wks., City Hall, rejected bids Nov. 18, Southwest Trafficway project, main viaduct $600,000. CD 11/21 under LB—ENR 10/30.

New Jersey—E. D. Sterner, comr. State Hy. Dpt., Trenton, rejected bids Nov. 14, P. R. R. Bridge, Rt. 39, Burlington Co. Will readvertise. CD 10/29—ENR 11/6.

New York—State Dpt. P. Wks., Albany, rejected bids Nov. 6, constructing Hudson River Bridge, Mechanicville, Saratoga and Rensselaer Counties. $182,431. Will readvertise. CD 11/11—ENR 11/13 under LB.

North Carolina — State Hy. & P. Wks. Comn., Raleigh, bids soon, widening approach spans, Roanoke River Bridge, U. S. 17, Proj. 1066, Williamston, Martin and Bertie Counties $100,000-$125,000. W. V. Baise, Raleigh, engr. CD 9/18—ENR 9/26.

North Carolina—State Hy. & P. Wks. Comn., Raleigh, southern underpass, west of Asheville R.R. Proj. 9074, U.S. 19 and 23, Buncombe Co. $30,000. W. V. Baise, Raleigh, engr.

★**North Carolina**—State Hy. & P. Wks. Comn., Raleigh, bridges over Northeast River near Chinquapin, N. C. Rt. 41, Proj. 2223, Duplin Co., $30,000; over Northeast River east of Burgaw, N. C. 53, Proj. 3514, Pender Co., $30,000; over Black River east of Kelly, N. C. Rt. 53, Proj. 3007, Bladen and Pender Counties, $30,000; over Dan River west of Danbury, N. C. Rt. 89, Proj. 7508, Stokes Co., $48,000; overhead Southern Ry., Salisbury, U. S. 52, Proj. 6763, Rowan Co., $27,000; over New River at Sneads Ferry, N. C. Rt. 172, Proj. 253, Onslow Co., $250,000; over New River at Jacksonville, U. S. Rt. 17, Proj. 3633, Onslow Co., over $100,000; over Little River, N. C. Rt. 210, Proj. 3445, Cumberland Co., $30,000; from U. S. at Vass to Fort Bragg, Proj. 256, Moore-Hoke-Cumberland Counties. Over $65,000. W. V. Baise, Raleigh, engr.

O., Youngstown—Mahoning Co. preparing plans bridge over Mill Creek on Old Furnace Rd. Over $100,000. R. J. Schomer, co. engr.

Ont., Toronto — Bridge, south Glen Rd. $50,000; bridge Huntley Ave., $50,000.

Ont., Toronto — Bridge, Sherbourne St. $50,000.

Que., Hull — Province of Quebec, Quebec City, reconstructing Pickanock Bridge, Hull-

BRIDGES, etc. (Proposed Work, Cont'd.)

Maniwaki Hy. $35,000. E. Gohier, Dpt. Roads, Quebec City, engr.

Que., St. Roch des Aulnaies—Province of Quebec, Quebec City, reconstructing bridge over Ferree River and approaches. $30,000. E. Gohier, Dpt. Roads, Quebec City, engr.

BIDS ASKED

Bids Asked November 27

North Carolina—State Hy. & P. Wks. Comn., Raleigh, structures, 3.13 mi. Project 7508. Stokes Co., $25,000-$50,000; 11.68 mi. Project 6870, Cabarrus and Stanly Counties, $75,000-$100,000. W. V. Baise, Raleigh, engr.

Bids Asked December 1

Mass., Boston—P. Wks. Dpt., City Hall Annex, rebuilding Summer St. Bridge over Reserved Channel. $50,000.

Bids Asked December 2

Connecticut—State Hy. Dpt., W. J. Cox, comr., Hartford, concrete, rigid frame bridge, 1,370 ft. rein.-con. approaches, Trunk Line, Groton; 70 ft. span thru girder railroad overpass, Maxim Rd., 2 span rein.-con. rigid frame bridge, 921 ft. bituminous macadam approaches, substructure, 12-70 ft. rolled steel beam spans, superstructures, Trunk Line, Hartford; installing 48 in. ACC M P culvert and replacing bituminous concrete, Trunk Line, Middletown. Over $25,000.

Iowa—State Hy. Comn., Ames, one 22x240 ft. I-beam bridge, FAS-740-A(1), Appanoose Co.; one 22x72 ft. 2 span concrete rigid frame bridge, FSN-606-B, Butler Co.; 7 rein.-con. box culvert extens., 1 rein.-con. pipe, drop inlet, flume outlet, FM-44, Wright Co.; 10 rein.-con. box culverts, extens., FAS 767-A(1), Wright Co. F. R. White, Ames, engr.

Bids Asked December 3

Kansas—State Hy. Dpt., Troy, 8x8 ft. culvert exten., K1479, Brown Co.; Bridge 22.6, Bridge 26.4, and Bridge 25.2, FAS 139 A, Doniphan Co. W. S. McDaniel, asst. engr. Topeka.

Bids Asked December 10

Louisiana—State Hy. Dpt., Baton Rouge, W. Prescott Foster, dir., Bayou Barataria Bridge, State Route C-2060, S.F. 826-39-01, Jefferson Parish.

Rhode Island—State Purchasing Agt., Providence, superstructure Bridge 275, bituminous macadam paving and approaches, Mendon Rd., FAP 67-C(1), FAP 41-E(1), Lincoln and Cumberland, over $100,000; sheet asphalt paving 1.74 mi. West Warwick and Coventry, FAP 77-E(1), over $65,000.

Bids Asked December 12

New Jersey—E. D. Sterner, comr., State Hy. Dpt., Trenton, Beach Thorofare Bridge, approaches, 0.436 mi. Rt. 56, Sect. 1, Atlantic City, Atlantic Co.; adv. ENR 11/27.

Bids Asked December 22

Tex., Angleton—Brazos River Harbor Navigation Dist., J. C. Henderson, chn., reconstructing Churchill, Hinkle Ferry and McNeil Bridges. G. E. Cole, Court House, engr.

LOW BIDDERS

Illinois—State Dpt. P. Wks. & Bldgs., Div. Hys., Springfield, Nov. 18, bridge floor and handrail, for Salt Creek bridge, Logan Co., from Sangamo Constr. Co., 700 W. Grand Ave. N., Springfield, **$52,598;** 2 rein.-con. bridges, Greene and Morgan Counties, from Waukegan Constr. Co., 410 S. 5 St., Springfield, **$40,691.** CD 11/7—ENR 11/13 under Roads.

Maryland and **Virginia**—State Roads Comn., of Maryland, Baltimore, Md., L. H. Steuart, secy., Nov. 18, Contr. 7, fenders for main span piers, Potomac River Bridge, between Ludlow Ferry, Md. and point near Dahlgren, Va., Contr. CH 124-7-842, from Lynn Constr. Co., 11 W. 42 St., New York, N. Y., **$147,970.** Est. $110,000. CD 11/3—ENR 11/6.

Tennessee—State Hy. Dpt., Nashville, Nov. 14, bridge, approaches, Campbell Co., from Ziegler Constr. Co., American Natl. Bank Bldg., Nashville, **$38,875;** 5 bridges, Morgan Co., from A. B. Long, Harriman, **$34,570.** CD 11/3—ENR 11/6 under Roads. CD 11/3—ENR 11/6.

CONTRACTS AWARDED

Georgia—State Hy. Bd., Atlanta, 2 bridges, Mill and Gum Creeks, Wheeler and Telfair Counties, to Pettus Constr. Co., Montgomery, Ala., **$32,680;** overhead bridge, Fulton Co., to S. B. Slack, Decatur, **$92,965.** Bids 11/14. CD 11/5.

Mass., Boston—City, Boston & Cambridge Bridge Comn., City Hall Annex, exten. Longfellow Bridge over Charles River, to J. A. Singarella Co., 143 Federal St., **$38,580.** Bids 11/12.

Mich., Highland Park — Wayne Co. Rd. Comn., Barlum Tower, Detroit, 4 single arch, 77 ft. span, concrete, steel bridge spans, carrying streets over Davison Ave. depressed hy., to W. J. Storen Co., 2411 Fourteenth St., Detroit, **$290,322.** Bids 11/10. CD 11/5.

Tex., Houston—Harris Co., c/o Judge, concrete bridge over Little White Oak Bayou, blacktop paving 0.9 mi. road, to W. E. Worthon, 7102 N St. **$27,312,** not incl. steel. H. W. Zapp, co. engr.

Wyoming—State Hy. Comn., Cheyenne, bridge, Park Co., to C. M. Smith, Thermopolis, **$51,739.** Bids asked and awarded 11/13. CD 11/11 under Roads.

STREETS AND ROADS

BIDS ASKED

Bids Asked December 1

Ill., Villa Park—Concrete curbing, guttering, bit. surfacing 0.3601 Sect. 7-CS. G. H. Baker, Springfield, engr. county roads and city streets.

N. Y., Brooklyn—President Brooklyn Boro, Boro Hall, asphalt on 6 in. concrete paving Clarkson Ave. and 73 St.

Bids Asked December 2

Connecticut—State Hy. Dpt., W. J. Cox, comr., Hartford, single and dual rein.-con. paving 19,964 ft. Trunk Line, East Lyme-Waterford; bituminous macadam paving, 2,207 ft. Trunk Line, Mansfield; traffic bound gravel roads, 6,300 ft. Hampton; RBR graveling 5,101 ft. town rds., Andover; 6,452 ft., Canterbury; 3,819 ft., Brookfield; 3,700 ft., Scotland; 3,155 ft., Sprague; 6,884 ft., Columbia. Over $25,000.

Iowa—State Hy. Dpt., Ames, paving 5.304 mi., FA-764-A(1), Jasper Co., grading 7.743 mi., FAS-740-A(1), Appanoose Co.; 5.034 mi. FA-764-A(1), Jasper Co.; 8.914 mi., FM-44; 5.955 mi., FAS-767-A(1), both Wright Co. F. R. White, Ames, engr.

†La., Leesville—Mayor and Bd. Alderman, paving, streets, Docket La-161101. **DPW.** J. M. Fourmy, Hammond, engr.

Bids Asked December 3

Kansas—State Hy. Dpt., Troy, resurfacing material, 2.462 mi. K1553, 1.500 mi. K1918, both Jackson Co.; 11.751 mi. K1554, Osage Co.; light type surfacing 16.225 mi. K1135, Wabaunsee Co.; surfacing for detours, 8.8 mi. FAS 139A, Doniphan Co.; grading, culverts 7.165 mi. FAS 139A, Doniphan Co. W. S. McDaniel, Topeka, asst. engr.

Bids Asked December 4

Florida—State Road Dpt., Tallahassee, T. A. Johnson, chn., bituminous on Miami lime rock surfacing 2 bridges, etc., 5.045 mi. Rd. 30, S.P. 5011(2), Indian River Co. J. H. Dowling, Tallahassee, state hy. engr.

New Hampshire—State Hy. Dpt., Concord, 3 in. road mix on gravel surfacing 5.419 mi. and 303 ft. bridge, Daniel Webster Hy., Grafton Co. $410,000.

Bids Asked December 5

Kansas—State Hy. Dpt., Burlington, grading 0.038 mi. K4165, Allen Co.; resurfacing material 3 mi. K4613, 10.655 mi. K4612 AB, both Miami Co.; 11.22 mi. K4623, 1.162 mi. K4611, both Franklin Co.; 20.82 mi. K4619 AB, Anderson Co.; 6.08 mi. K4620, Bourbon Co.; 17.99 mi. K4622, 4.855 mi. K4621, both Coffey Co.; 7.520 mi. K4624, Montgomery Co. W. S. McDaniel, Topeka, asst. engr.

New Jersey—E. D. Sterner, comr. State Hy. Dpt., Trenton, grading, paving, 2.846 mi. Rt. 28, Sect. 22 A, Lebanon Relocation, Hunterdon Co., CD 11/5—ENR 11/13; pavement widening, dualization 0.836 mi., Rt. 29, Sect. 3C, Newark, Essex Co.; reconstructing approach structure, Newton Creek Bridge, Rt .45, Haddon Twp., Camden Co.; constructing approach structure, 0.139 mi., Big Timber Creek Bridge, Rt. 45, storm drains, Big Timber Creek Bridge, Rt. 47, Brooklawn Boro, Camden Co.

Bids Asked December 9

†California—Pub. Roads Admin., Federal Office Bldg., San Francisco, grading, paving, etc. 0.454 mi. Sweetwater River Bridge, approaches, San Diego Co.

†Calif., Stockton—Con. Q. M., Fort Mason, San Francisco, roads and sidewalks, Specialist Mechanics School, Inv. W-7215-42-10.

North Dakota—State Hy. Dpt., J. S. Lamb, comr., Bismarck, bituminous sealcoat on 11.922 mi. FAP 166 (8) and 110(3), Walsh and Grand Forks Counties; stabilized gravel base, bituminous surface treatment 17.333 mi., FAP 175AB (3) and SAP 376, Wells Co.; stabilized gravel or sand base, bituminous surface treatment 24.624 mi. FAP 662(1) and 150 (2), Dickey and LaMoure Counties; regrading and incidental, 18.261 mi., FAP 293A(2), Pembina Co.: 8.15 mi., FAP 334A(4), Traill Co.; structural work, FAP 293A(2), Pembina Co.

Bids Asked December 10

†Colorado—Bureau Reclamation, Customhouse, Denver, relocating State Hy. 9, Green Mountain Dam, Colorado-Big Thompson Project, Spec. 1015; adv. ENR 11/27.

Bids Asked December 11

California—C. H. Purcell, engr. State Hy. Dpt., State Bldg., Los Angeles, concrete and asphaltic concrete surfacing 0.3 mi. Long Beach Traffic Circle (VII-L.A.-60-LBch,F), Los Angeles Co.

Florida — T. A. Johnson, chn. State Road Dpt., Tallahassee, concrete paving, concrete box culverts, 12.627 mi. State Road 8-A F.A.P. SN-FA-122-A(1), Operating No. 3161, Glades and Highlands Counties; constructing 0.733 mi. hydraulic embankment, approaches to Indian River Bridge, Fort Pierce, S.P.5576(1), St Lucie Co. J. H. Dowling, state hy. engr.

Bids Asked December 12

Minnesota—State Hy. Dpt., St. Paul, gravel surfacing 9.9 mi. S.P.0901-25 (Trunk Hy. 23-185) SN-Fed. Aid Proj. 520C(4), 520A(2) and 520B(2). Over $25,000 (unofficial). J. T. Ellison c/o owner, ch. engr.

New Jersey—E. D. Sterner, comr. State Hy. Dpt., Trenton, constructing 1.782 m., Rt. 28, Sects. 24A and 25A, Whitehouse Relocation, Hunterdon Co.; adv. ENR 11/27.

Bids Asked December 16

†Calif., Inglewood—U. S. Eng., 751 S. Figueroa St., Los Angeles, 6 in concrete on gravel paving 48,000 sq. yd., Miners Field.

Bids Asked

†Calif., Victorville—U. S. Eng., 751 S. Figueroa St., Los Angeles, postponed indefinitely bids to have been opened Nov. 14, streets, Victorville Airport. Over $25,000. CD 10/29—ENR 11/6.

Texas—D. C. Greer, engr. State Hy. Dpt., Austin, will not receive bids Nov. 26, imprv. 0.123 mi. hy. U. S. 90, SNFAP 326 (4), Contr. 2, Control 27-8-24, Fort Bend Co. CD 11/18.

LOW BIDDERS

Alabama—State Hy. Dpt., Montgomery, Nov. 14, imprv. overpass over Central of Ga. R.R., 0.331 mi. Talladega Co., from A. L. Crow Constr. Co., 120 S. 41 St., Birmingham, **$60,727;** superstructure Foster's Ferry Bridge, near Tuscaloosa, Tuscaloosa Co., from Virginia Bridge Co., 3900-8 Ave., Birmingham, **$172,800.** CD 11/7.

California—C. H. Purcell, engr. State Div. Hys., Sacramento, Nov. 12, imprv. 8 mi. Kern and Tulare Counties, from L. Biasotti, P. O. Box 587, Stockton. **$131,748.** CD 10/27—ENR 10/30.

California—C. H. Purcell, engr. State Hy. Dpt., Sacramento, Nov. 19, imprv. 0.5 mi. Humboldt Co., from J. L. Conner & Sons, P. O. Box 145, Point Arena. **$47,379.** CD 11/5.

Connecticut—State Hy. Dpt., Hartford, Nov. 17, imprv. 7,779 ft. Parker, Blanton, Coburn and Hollow Rds., Sherman, from Innis Bros., Inc., 48 Clay St., Thomaston, **$25,974;** removing timber deck and installing 3½ in. concrete filled steel deck, Connecticut River Bridge, Old Lyme-Old Saybrook, from Mariani Constr. Co., 222 Forbes Ave., New Haven, **$144,601.** CD 11/6—ENR 11/13.

Fla., Daytona Beach—Volusia Co. Comn., De Land, paving 7.3 mi. Reed Canal Rd., from Frank Constr. Co., Daytona Beach. **$39,818.** E. Freeman, Daytona Beach, engr.

Illinois—State Dpt. P. Wks. & Bldgs., Div. Hys., Springfield, Nov. 18, imprv. 4.72 mi. Stephenson Co., from J. E. Schultz, Madison, Wis. **$84,471*****3.57 mi. Sangamon Co., from Hurden Constr. Co., Reisch Bldg., Springfield, **$217,032*****7.05 mi. Coles and Doulgas Counties, from F. C. Feutz, Paris. **$59,562.** CD 11/7—ENR 11/13.

Iowa—State Hy. Comn., Ames, Nov. 18, imprv. 4.395 mi. Boone and Dallas Counties, and 4.572 mi., Boone-Greene Counties, from Burch Constr. Co., Cedar Rapids, **$35,441** and **$34,317** respectively; 8.268 mi. Jasper Co., from Roth Constr. Co., Indianola. **$25,883.** CD 11/7—ENR 11/13.

Maryland—State Roads Comn., Baltimore, Nov. 18, imprv. 0.74 mi. Westover Pocomoke Rd., Constr. S-124-1-111, Somerset Co., from Phillips Brothers, Salisbury. **$51,917.** CD 11/10—ENR 11/13.

Minnesota—State Hy. Dpt., St. Paul, Nov. 14, imprv. 9.7 mi. S.P. 1506-01, from Strom Constr. Co., Moorhead, **$78,555*****5.7 mi. S.P. 2206-01 and S.P. 2407-01, from Jack & Judd Brown, Madison Lake and Lundin Bros., Mankato, **$66,718*****1.2 mi. S.P. 6903-01 and S.P. 6904-03 and S.P. 6913-01, from Rhude & Fryberger, 525 E. 11 St., Duluth, **$95,042*****4.9 mi. S.P. 6931-02, from Whitman & Borg, Bovey, **$130,479*****2.7 mi. S.P. 1918-02, from S. J. Phillippi, Bemidji. **$139,912.** CD 10/29—ENR 11/6.

New Jersey—E. D. Sterner, comr. State Hy. Dpt., Trenton, Nov. 14, imprv. 1.767 mi. Hunterdon Co., from Louis Sodi, 1 S. Main St., Lambertville, **$58,691.** CD 10/27—ENR 11/6.

New Jersey—E. D. Sterner, comr. State Hy. Dpt., Trenton, Nov . 21, imprv. 1.269 mi. Rt. 35, Sect. 38A, Morgan to Laurence Harbor, Middlesex Co., from Weldon Contg. Co., Westfield, **$481,161.** CD 11/5—ENR 11/13.

★ **Tennessee**—State Hy. Dpt., Nashville, Nov. 14, imprv. 3.333 mi. Knox Co., from B. G. Young, Jonesboro, **$178,131*****7.157 mi. Henry Co., from McDade & McDade, Fulton, Ky., **$118,604*****4.516 mi. Giles Co., from G. O. White, 130 Market St., Chattanooga, **$172,937** ***8.545 mi. Dickson Co., from Ralph Rogers Co., Shelbyville, **$230,636*****1.808 mi. F.A.P. 231-H(1), and 1.309 mi. SN-F.A.P. 269-A(2), both Hamilton Co., from Polk Smartt Paving Co., 1009 Morningside Dr., Chattanooga, **$217,972** and **$58,954** respectively***3.52 mi. Coffee Co., from H. E. Wolfe Const. Co., St. Augustine, Fla., **$118,568*****11.826 mi. Moore and Bedford Counties, from T. M. Strider & Co., Cotton States Bldg., Nashville, **$267,277*****4.723 mi. Rutherford Co., from R. E. Martin, Hillsboro Rd., Nashville, **$55,527*****3.074 mi. Macon Co., from Marion Constr. Co., Nashville, **$50,799** ***0.619 mi. Shelby Co., from B. M. Hogan, 443 N. Front St., Memphis, **$63,903*****6.494 mi. Hamilton Co., from Allied Constr. Co., Nashville, **$297,962*****3.077 mi. Unicoi Co., from Foster & Creighton Co., American Natl. Bank Bldg., Nashville, **$331,042.**

STREETS, etc. (Continued)

CONTRACTS AWARDED

Ark., Marshall—Searcy Co., J. I. Horton, judge, imprv. roads. **WPA. $140,857.**

†California—U. S. Eng., 208 Post Office Bldg., Sacramento, crushed stone surfacing along West Levee of Sutter Bypass and North Levee of Tisdale Bypass from Butte Slough to Tisdale Weir, to Hemstreet & Bell, P. O. Box 906, Marysville. **$33,325.** Est. $43,875. Bids 11/21. CD 11/19.

Calif., Sacramento—Grading, asphaltic concrete paving, vitr. sewers, to J. R. Reeves, P. O. Box 1072. **$25,438.**

Calif., San Francisco—Owners, c/o contractors, grading, asphaltic concrete paving, vitr. sewers, portions Moraga St. and 31 Ave., to C. L. Harney, Call Bldg. **$26,600.**

Colo., Trinidad—J. Ingles, city clk., streets imprvs. **WPA. $248,097.**

Florida—State Road Dpt., Tallahassee, T. A. Johnson, chn., bituminous on Miami lime rock surfacing 2 bridges, etc., 5.045 mi. Rd. 30, S. P. 5011(2), Indian River Co. J. H. Dowling, Tallahassee, state hy. engr.

★**Florida**—State Road Dpt., Tallahassee, imprv. 13.8 mi. St. Johns Co., to Duval Eng. & Constg. Co., foot of East Adams St., Jacksonville, **$345,431*****3.6 mi. **Jackson Co.,** to C. C. Moore Co., Panama City, **$262,870***** 2 mi. Highlands Co., to M. C. Cadell, 2014 Dennis St., Jacksonville, **$39,904*****5.79 mi. Clay Co., to H. E. Wolf Constr. Co., St. Augustine, and L. B. McLeod, Starke, **$188,294*****2 mi. Polk Co., to J. D. Manley, Leesburg, **$164,501** ***two 1-lane 44 ft. access roads, bridge, Escambia Co., to Smith Eng. & Constr. **Co.,** West Pensacola, **$188,167*****two 1-lane access roads, bridge, Escambia Co., to Noonan Constr. Co., 1001 E. Gregory St., Pensacola, **$177,200*****1.5 mi. Hendry Co., to J. H. Craggs, Ocala, **$72,995.** Grand total $1,439,362. Bids 11/13, awarded 11/13. CD 10/30 and 11/5—ENR 11/6.

★**Georgia**—State Hy. Bd., Atlanta, imprv. 9.938 mi., Habersham and Stephens Counties, to R. H. Wright & Son, Columbus, **$168,718*****1.823 mi. Barntley and Pierce Counties, to Scott Constr. Co., Thomasville, **$63,979** and to Warner Constr. Co., Valdosta, **$130,636** ***12.313 mi., and 1 bridge, 1 bridge culvert, Appling Co., and 7.43 mi. Washington Co., to L. T. Barber, Moultrie, **$168,269** and **$105,641** respectively*** 4.307 mi. road, 4 concrete box bridges, Rabun Co., to C. M. Lyle Constr. Co., Gainsville, **$142,959*****3.733 mi., 4 bridges, Pierce Co., to J. E. Roller, Mt. Vernon, **$58,722** and to G. L. Strickler, Austell, **$73,976.** Grand total $902,900. Bids 11/14—CD 11/5.

★**Idaho**—State Hy. Dpt., Boise, 6 mi. hy. along cliffs Salmon River, Cottonwood Cut-Off, of North-South Hy. **WPA. $700,000.**

Ill., Oaklawn—Imprv. 0.9835 mi. Sect. 2-CS, to Black Tops Rd. Co., 1929 N. Narragansett Ave., Chicago. **$34,905.** Bids 10/14. CD 10/7—ENR 10/9.

Ia., Waterloo—Black Hawk Co., imprv. roads. **WPA. $175,000-$200,000.**

†Md., Middle River—Farm Security Admin., The Mall, 12 to 14 Sts. S.W., Wash., D. C., clearing, grading construction roads, walks, etc., Glenn L. Martin plant, to Williams Contr. Co., Middle River. **$28,400.**

Nevada—Directors Dpt. Hys., Carson City, imprv. 4.46 mi. Clark Co., to Silver State Constr. Co., Fallon, **$87,571*****10.71 mi. Lander Co., to Isbell Constr. Co., P. O. Box 2351, Reno, **$128,450.** Bids 11/13. CD 11/6.

N. J., Atlantic City—Grading, 4 in. concrete sidewalks, concrete curbs, 2nd and 3rd Ward. **WPA. $45,480.** G. R. Swinton, 930 Atlantic Ave., Atlantic City, WPA engr.

†N. J., Bellmawr—Federal Works Agency, 18th and F Sts. N.W., Wash., D. C., grading, concrete sidewalks, curbing, guttering 3 in. penetration macadam paving areas in defense housing project. **WPA. $66,549.**

N. J., Jersey City—Hudson Co., Court House, 16,486 ft. of 5x16 in. bluestone radial curbs, **WPA. $64,202.** F. Radigan, Court House, co. engr.

N. Y., Brooklyn—President Brooklyn Boro, Boro Hall, repaving on concrete fdn., etc., **$182,000*****reconstructing malls with granite blocks, concrete walks, catch basins, curbing, etc., **$130,762*****altering street corners, reconstructing catch basins, **$142,050. WPA.** Grand total $454,812. W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., Kew Gardens—Dpt. Parks, Arsenal Bldg., Central Park, 5 Ave. and 64 St., New York, bituminous topping on paths, drainage and paving park area, new bulkhead stone gutter, various locations, Queens Co., **WPA. $93,459.** W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., Kimball Stand (P. O. Jamestown)—Chautauqua Co. Hy. Dpt., 454 N. Work St., Falconer, and city of Jamestown, Dpt. P. Wks., City Hall, Jamestown, grading, stone base, bituminous materials paving roadway from Route 60 to Jamestown municipal airport, N. Main St. Exten., own forces. **$26,000.** B. Chilson, c/o Chautauqua Hy. Dpt., Falconer, co. supt. hys.

N. Y., New York—Dpt. Health, Municipal Bldg., leveling, grading, Rikers Island, **WPA. $205,018.** W. W. Johnstone, 70 Columbus Ave., dir. Div. Operations.

N. Y., New York—Dpt. Parks, Arsenal Bldg., Central Park, 5 Ave. and 64 St., repaving paths in Central Park, Central Park West to 5 Ave., **WPA. $50,762.** W. W. Johnstone, 70 Columbus Ave., dir. Div. Operations.

Okla., Sallisaw — Sequoyah Co., Sallisaw, grading, gravel surfacing roads. **WPA. $70,312.** F. Johnson, Sallisaw, engr.

†Ore., Astoria—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., access road to Tongue Point Naval Air Station. **WPA. $72,000.**

Tex., Dallas—Dallas Co., c/o Judge, imprv., reconstructing Elmore Ave., Kessler Blvd., Uhl Rd., Tyler and Illinois Sts. **WPA. $82,087.**

Tex., Lufkin—C. L. Stine, mayor, additional concrete paving, curbing, guttering, to Reynolds & Sutton, Tyler. **$72,314.** Est. $70,000. Koch & Fowler, 701 Great Natl. Life Bldg., Dallas, engrs.

Tex., San Antonio—C. K. Quin, mayor, removing 10 mi. street car rails, concrete paving afterwards. **WPA. $53,305.**

Wis., Appleton—Outgamie Co., farm to market roads, **WPA. $100,242.** A. Krueger, Appleton, engr.

Wis., La Crosse—Grading streets, alleys, to La Crosse Transit-Mix Concrete Supply Co., La Crosse, **$26,810.** J. H. Barth, city engr.

Wyoming—State Hy. Comn., Cheyenne, imprv. 2.891 mi. Carbon Co., to Teton Constr. Co., Cheyenne, **$78,723;** 2.292 mi., Uinta Co., to Woodward Constr. Co., Rock Springs, **$53,387.** Bids 11/13, awarded 11/13. Rejected bids 11/13, imprv. 2.367 mi. Shoshoni-Pavillion Rd., Fremont Co. CD 11/11.

EARTHWORK, WATERWAYS

PROPOSED WORK

Calif., Redding—Anderson-Cottonwood Irrigation Dst., completng plans constructing works to siphon water across Sacramento River at Churn Creek.

Mont., Kalispell—F. J. Robischon, city clk., drainage sys. $15,000. J. E. Norback, city engr.

†New Jersey—U. S. Eng., 17 Battery Pl., New York, N. Y., dredging Toms River, $141,000; dredging Cold Spring Inlet on Atlantic Ocean, $71,000.

N. J., Hackensack—Bergen Co., Administration Bldg., imprv. drainage sys., water gates, rebuilding dikes, etc., Bendix, $38,000. R. P. McClave, Administration Bldg., engr.

N. J., Newark—Essex Co., Hall of Records Bldg., excavating 77,000 cu. yd. channel bottom in Passaic River from Pine Brook to Horseneck Bridge. $105,306. WPA. C. Malstrom, Orange and N. 6 Sts., Newark, WPA engr.

†Rhode Island—Pub. Works Officer, Naval Training Station, Newport, dredging 180,000 cu. yd. off north end Gould Island, Narragansett Bay, Spec. 10747. $40,000.

†Rhode Island—U. S. Eng., 819 Industrial Trust Bldg., Providence, bids in spring, dredging 3,370 cu. yd. material and removing 730 cu. yd. ledge rock from Providence Harbor and Providence River, Inv. 42-18. CD 8/12—ENR 8/14.

Tex., Port Lavaca—Voted $300,000 bonds, making plans seawall. F. G. Huffman, Rockport, engr. CD 11/14—ENR 11/20.

BIDS ASKED

Bids Asked December 3

†Mass., South Boston (Sta. Boston)—Pub. Wks. Officer, Bldg. 200, Navy Yard, dredging, Naval Dry Dock, Spec. 10630.

Bids Asked December 5

†Arkansas—U. S. Eng., Post Office Bldg., Vicksburg, Miss., constructing Old McClure Place New Levee, 108,000 cu. yd. earth embankment, approx. 1.5 mi. south of Garland City, Miller Co.

Bids Asked December 12

†Tex., Denison—U. S. Eng., Citizens Bank Bldg., two 36,842 kva. alternating current generators, auxiliaries, for Denison Dam and reservoir, Red River. Extended date. CD 11/10—ENR 11/13.

Bids Asked December 15

†Colorado—Bureau Reclamation, Customhouse, Denver, Colo., furnishing, del. one 36 in. welded-plate-steel outlet pipe for Jackson Gulch Dam, Mancos Project, Spec. 1592-D.

†La., Harvey—U. S. Eng., foot of Prytania St., New Orleans, 233 ft. timber guide wall and 10 timber pile dolphins, incl. removal 9 timber pile dolphins and portion Harvey Lock, excav. 7,000 cu. yd. earthwork, etc., Harvey Lock.

Bids Asked December 16

†West Virginia — U. S. Eng., **Huntington,** constructing Bluestone Dam, etc., in **New** River, near Hinton; adv. **ENR 11/27.**

Bids Asked December 17

†California—Bureau Reclamation, **Denver,** Colo., furnishing, del. fourteen 102 in conduit tube valves for installation in river outlets at Shasta Dam, Central Valley Project, Spec. 1016; adv. ENR 11/27.

Bids Asked December [illegible]

†Ohio—U. S. Eng., 925 New [illegible]ral Bldg., Pittsburgh, Pa., Berlin Dam, c[illegible]te, earth, Mahoning River, Mahoning and [illegible]age Counties, Inv. 1101-42-220. CD 10/2[illegible] [illegible]NR 10/22.

Bids Asked December [illegible]

★**Tex., Houston** — Harris Co[illegible]o H. L. Washburn, aud., Courthouse, [illegible]mi. earthen dam, with outlets, concrete f[illegible]g, across Buffalo Bayou, 14 mi. from he[illegible] $2,000,000. A. C. Finn, Bankers Mortgage B[illegible]g., engr.

Bids Asked December 2[illegible]

†New York and New Jersey—[illegible] S. Eng., Whitehall Bldg., 17 Battery Pl[illegible] New York, N. Y., excavating, disposing 6[illegible]0 cu. yd. place measurement ledge rock [illegible]d 112,450 cu. yd. material other than ledge rock from Sect. 7,. Rock Area 12, New York and New Jersey Channels; adv. ENR 11/2[illegible]

Bids Asked December 29

†Washington—Bureau Reclamation, Denver, Colo., furnishing, del. hydraulic hoists, penstock coaster gates, for Grand Coulee Dam, Columbia Basin Proj., Spec. 1012. Extended date. CD 10/28—ENR 10/30.

LOW BIDDERS

Calif., Newport Beach—City, Nov. 17, 455 ft. concrete, steel pipe bulkhead, near harbor entrance, from Mojave Corp., 10[illegible]4 W. Los Nietos Rd., Los Nietos. **$20,999.** Est. $19,200. CD 11/12.

★**†Illinois**—U. S. Eng., P. O. Box 59, Louisville, Ky., Nov. 14, flood protection works, Cache River Diversion, Unit 1, Mound City, from Stiers Bros. Constr. Co., 2944 Magazine St., St. Louis, Mo. **$543,089.** CD 11/5—ENR 11/13.

†Massachusetts—U. S. Eng., Park Sq. Bldg., Boston, Nov. 13, dredging 73,750 cu. yd. Mystic River, Inv. 175-42-56, from M. J. S. Packard Dredging Co., 1 Court St., Boston, **$1.20** per cu. yd. Total **$88,500.** CD 10/29—ENR 11/6.

†Washington—Bureau Reclemation, Customhouse, Denver, Colo., furnishing 3 hydraulic turbines, 3 oil pressure, actuator-type governors for regulating speed of turbines for Units L-7, 8 and 9, Grand Coulee Power Plant, Columbia Basin Proj., Spec. 1013, Schedule 1, from Newport News Shipbuilding & Dry Dock Co., Newport News, Va., **$1,900,000;** Schedule 2, from Woodward Governor Co., Rockford, Ill., **$87,550.** Bids 11/13. CD 10/27—ENR 10/30.

CONTRACTS AWARDED

†California—Bureau Reclamation, Customhouse, Denver, Colo., furnishing eight temporary conduit units for outlet works, Shasta Dam on Central Valley Project, Spec. 1574-D, to Southwest Welding & Mfg. Co., Alhambra **$70,413.** Bids 10/27. CD 10/8—ENR 10/16 under Unclassified.

Ia., Sioux City—Imprv. mouth Perry Creek as flood control project. **WPA. $150,000.**

†Md., Annapolis—Pub. Works Officer, U. S. Naval Academy, rein.-con. cap on timber piles, approx. 3,000 ft. long, U. S. Naval Academy, to Philip Vizzini, 3904½ Boarman Ave., Baltimore. **$31,762.** Est. $30,000. Bids 11/12. CD 10/24—ENR 10/30.

Massachusetts—Commonwealth Mass., Metropolitan Dist. Comn., Parks Div., 20 Somerset St., Boston, exten. concrete seawall, Winthrop, to C. and N. Constr. Co., 75 Bradeen St., Roslindale (Boston), **$16,815.** Est. $20,000. CD 10/31—ENR 11/6.

Mass., Gloucester—Commonwealth of Massachusetts, Dpt. P. Wks., H. L. MacDonald, comr., 100 Nashua St., Boston, dredging 20,000 cu. yd. Gloucester Inner Harbor, to J. S. Packard Dredging Co., 1 Court St., Boston, **$14,475.** Bids 11/4. CD 10/22—ENR 10/30.

†Missouri—U. S. Eng., 601 Davidson Bldg. Kansas City, Mo., 3,000 ft. revetment in Missouri River at Diana Bend, 6 mi. from Boonville, hired labor and government plant. Est. **$70,000.**

N. J., Newark—Essex Co., Hall of Records Bldg., excavating 70,880 **cu.** yd. earth from channel Rockaway and **Passaic** River to Pine Brook. **WPA. $46,687.** C. Malstrom, Orange and N. 6 St., Newark, **WPA** engr. CD 11/11—ENR 11/13.

N. Y., Jamestown—Crescent Tool Co., Foote Ave. and Harrison St., straightening course Chadakoin River, also concrete retaining wall and fdn., to J. M. Benzinger, Inc., 121 W. 4 St Est. **$15,000.** CD 11/7—ENR 11/13.

†Tex., Brownville—Con. Q.M., Ft. Brown, imprv. military area, expansion drainage, ditching, levees, leveling, filling-in, utilities, etc., **WPA. $194,726.**

Tex., West University Place (mail Houston)—West University Place, c/o F. M. Mainous, mayor, 6419 Sewanee St., Houston, drainage **sys.,** to Texas Gulf Constr. Co., Inc., 3802 **Calhoun St., Houston, $131,441.**

UNCLASSIFIED

PROPOSED WORK

Colo., Colorado Springs—GAS IMPROVEMENTS—E. L. Moseley, city mgr., exten. gas, water and light to site proposed army camp, south of here. $297,000. Applied for **DPW gr.**

UNCLASSIFIED (Proposed Work, Cont'd.)

Fla., Fort Lauderdale — AIRPORT — Fort Lauderdale Municipal Airport, J. H. Philpott, city mgr., imprvs. and extens., municipal airport. $248,000. CAA.

Fla., Orlando—AIRPORT—Orlando Municipal Airport, Wm. Beardall, mayor, City Hall, municipal airport. $239,920. WPA. Marion Coggans, Orlando, WPA dist. mgr.

Fla., West Palm Beach—DRYDOCK, etc.—Port of Palm Beach, E. F. Stumpf, secy., West Palm Beach Chamber of Commerce, shipbuilding and repair drydock. Over $100,000.

★**Idaho, Twin Falls**—AIRPORT—City, 440 acre airport. $881,000. CAA. J. E. Hayes, City Hall, engr.

Maryland—FERRY SLIPS, etc.—State, Federal Reserve Bank Bldg., Baltimore, 2 pile, timber ferry slips with approach bridges, rein.-con. bulkhead, twin stone breakwaters, dredging approach channel, etc., Sandy Point, Anne Arundel Co.

★†**Md., Annapolis**—BOAT BASIN and SHIPYARD—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., bids probably early 1942 steel, concrete boat basin and shipyard. $500,000.

Mississippi — POWER LINES — Southwest Mississippi Electric Power Assn., Lorman, completing present power lines. $31,000. Funds allotted.

Miss., Laurel—PARK—City, Masonite Corp., B. Alexander, pres., developing William Mason Gardens, memorial park. $160,000 ultimate expenditure.

Montana—TRANSMISSION LINES— Vigilante Electric Co-operative, Inc., Twin Bridges, bids in December, 216 mi. transmission lines Beaverhead, Deer Lodgs, Silver Bow, Broadwater, Madison and Jefferson Counties. $220,000 REA allot. J. M. Garrison, Helena, engr. CD 10/16—ENR 10/23.

N. J., Bendix—AIRPORT—Skyways, Inc., 210 Main St., Hackensack, airport, 7 hangers, runways, etc. Rts. 2 and 6.

N. J., Newark—PARK IMPROVEMENTS—Essex Co. Park Comn., 115 Clifton Ave., imprv. parks, 7 rustic bridges, fences, landscaping, walls, etc. $55,000. WPA. R. D. Crater, 115 Clifton Ave., owner's engr.

†**N. M., Albuquerque**—AIRPORT—U. S. Eng., 1 and Douglas Sts. N.W., Wash., D. C., 2 addnl. runways, Air Base Training Center. $250,000. CD 9/24—ENR 10/2.

†**N. M., Roswell**—FLYING SCHOOL—U. S. Eng., Caddoa, Colo., Army Air Corps Flying School, incl. hangars, utilities, bldgs. to house 3,000 men, air field.

New York—RURAL ELECTRIC LINES—Chautauqua-Cattaraugus Electric Assn., Inc., R. O. Colburn, pres., Cherry Creek, 177 mi. rural electric lines, Chautauqua and Cattaraugus Counties. $176,000 REA allot.

New York—RURAL ELECTRIC LINES—Oneida County Electric Assn., Inc., R. A. Todd, pres., Clinton, 160 mi. rural electric lines, Oneida and Madison Counties. $170,000 REA allot.

North Dakota—RURAL ELECTRIC LINES—R. S. R. Electric Co-op., Milnor, bids in January, 249 miles transmission lines. $167,000. REA allot. Banister Eng. Co., 1586 University Ave., St. Paul, Minn., engr. CD 11/17—ENR 11/20.

†**O., Fairfield**—HANGAR—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., 120x200 ft. hangar, Patterson Field.

Okla., Choteau—SPUR TRACKS, etc.—Missouri, Kansas & Texas Ry. Co., F. Ringer, ch. engr., Railway Exch. Bldg., St. Louis, Mo., additional spur tracks, classification yards to serve powder plant. $35,000.

Okla., Durant — TRANSMISSION LINE — Oklahoma Gas & Electric Co., 34 N. Harmon St., Oklahoma City, made final plans relocating 18 mi. electric transmission lines, Red River Dam basin. $60,000. R. F. Danner, 136 NE 14 St., Oklahoma City, engr.

Ore., Portland—SHIPYARD—A. H. York, C. Sharp, R. C. Shattuck, c/o Supple Docks, Inc., foot of S.E. Yamhill St., shipyard. Over $40,000.

Pennsylvania — RURAL ELECTRIC LINES—Valley Rural Electric Co-operative Assn., Inc., J. H. Gahagen, pres., Hollidaysburg, 194 mi. rural electric lines, Proj. Blair 20-E, Blair, Huntingdon, Fulton, Franklin and Mifflin Counties. $219,000 REA. Gibbs & Hill, Inc., 600 N. 2 St., Harrisburg, engrs. CD 11/11—ENR 11/13.

Pa., Warren—STADIUM—School Dist., Boro of Warren and Boro Council, municipal stadium, present site Russell Field. $30,000. C. Barwis, boro engr.

Pa., Wilkes-Barre—SWIMMING POOL—L. K. Eldridge, city clk., modern swimming pool in Franklin Park, 14 Ward. $35,000-$40,000. G. B. Walker, city eengr.

R. I., Woonsocket—AIRPORT—Special Airport Com., A. E. Parent, 143 Bennett St., airport. Over $25,000.

South Dakota — TRANSMISSION LINES — Codington-Clark Elec. Assn., Watertown, A. L. Anderson, secy., 257 mi. transmission lines. $200,000 REA allot. Buell & Winter Eng. Co., 508 Insurance Bldg., Sioux City, Ia., engrs. CD 11/17—ENR 11/20.

S. D., Watertown—AIRPORT—Voted $20,000 bonds, airport. $154,000. CD 11/6.

Texas—RURAL ELECTRIC LINES—Coleman County Electric Co-operative, c/o R. S. Hale, Coleman, 100 mi. rural electric power lines, Sect. D. $55,000 REA allot. Freese & Nichols, Capps Bldg., Fort Worth, engrs.

Texas—RURAL ELECTRIC LINES—Greenbelt Electric Co-operative, Wellington, bids soon 144 mi. rural electric lines, Donley, Collingsworth and Armstrong Counties. $77,000. C. C. Cox, Oliver-Eagle Bldg., Amarillo, engr. CD 11/17—ENR 11/20.

Texas—RURAL ELECTRIC LINES—Kimble County Electric Co-operative, Junction, 314 mi. rural electric power lines, Kimble, Menard, Mason and Sutton Counties. $177,000 REA allot. Freese & Nichols, Capps Bldg., Fort Worth, engrs.

Texas—PIPELINES, etc.—Stanolind Oil & Gas Co., Philcade Bldg., Tulsa, Okla., pipelines, refinery unit, La Rosa Area, south Texas. $400,000.

Tex., Greenville—AIRPORT—U. S. Eng., Citizens Bank Bldg., Denison, revising plans airport. Bids 10/28 rejected, will readvertise. CD 11/5—ENR 11/13 under LB.

Tex., Highlands—SHIPBUILDING FACILITIES—San Jacinto Shipbuilders, Inc., c/o H. K. Johnson, Sr., Highlands, shipbuilding facilities, shops and 3 ways.

★**Tex., Houston** — AIRPORT — U. S. Eng., Federal Bldg., Galveston, municipal airport development, runways, taxi strips. $525,000. CAA.

Tex., Midland—AIRPORT IMPROVEMENTS—Bond election Dec. 2, airport imprvs. $60,000.

Wash., Spokane — AIRPORT — U. S. Eng., Central Bldg., Seattle, bids soon, concrete paving, draining runway 4,500 ft. long, airport, $120,000; bids later, asphalt surfacing 3,000 ft. runway, $70,000. CAA. CD 9/5—ENR 9/11.

Wis., Beloit—AIRPORT—Rock Co., airport. $100,000.

Wis., Oakdale—RURAL ELECTRIC LINES—Oakdale Co-op. Electric Assn., 149 mi. electric distr. line extens., Monroe, Juneau and Sauk Counties, Proj. Wis. 25-Monroe. $130,000. Wis. Development Auth., 602 Tenney Bldg., Madison, engr.

†**P. R., San Juan**—FLEET ANCHORAGE, etc.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., fleet anchorage and shore facilities.

BIDS ASKED

Bids Asked November 28

†**Tex., Camp Wolters**—LANDSCAPE DEVELOPMENT—Con. Q. M., Camp Wolters, landscape development, Regimental Area 1; adv. ENR 11/27.

Bids Asked December 3

★†**Mass., South Boston (Sta. Boston)**—DOCK—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D.C., concrete paving dock, etc., Spec. 10717. $6,500,000. Frederic R. Harris, Inc., Moran, Proctor, Freeman & Mueser, Parsons, Klapp & Brickerhoff & Douglas, and Fay Spafford & Thorndike, 27 William St., New York, N. Y., engrs. CD 10/28—NR 10/20, under Boston.

Bids Asked about December 4

†**Tex., Pottsboro**—AIR SPRINKLER SYSTEM—U. S. Eng., Citizens Bldg., Denison, facilities for complete hospital bldgs. air-sprinkler sys., Air Corps Basic Flying School, vicinity of here.

Bids Asked December 4

†**Washington** — TRANSMISSION LINE — Bonneville Power Administration, P. O. Box 3537, Portland, Ore., Midway-Coulee Sect., Bonneville-Coulee transmission line 2, Inv. 2403.

Bids Asked December 5

Calif., Long Beach—TAXIWAYS, etc.—U. S. Eng., 751 S. Figueroa St., Los Angeles, taxiways, grading, etc., Long Beach A. C. Ferrying Command. Over $25,000. CAA.

Bids Asked December 8

Utah, Logan—AIRPORT—U. S. Eng., 751 S. Figueroa St., Los Angeles, Calif., grading, asphaltic concrete paving Logan Airport, CAA program C. Over $25,000. CD 11/19.

†**Alaska, Yakutat**—GASOLINE FUELING SYSTEM—U. S. Eng., Central Bldg., Seattle, Wash., gasoline fueling sys., Air Corp Depot.

Bids Asked December 9

†**Tex., Waco**—FLYING SCHOOL—U. S. Eng., Federal Bldg., Galveston, buildings, utilities, streets and roads, Basic Flying School. Extended tentative date. CD 10/31—ENR 11/6.

Bids Asked December 10

†**Miss., Columbus** — HANGAR, etc. — U. S. Eng., Federal Bldg., Mobile, Ala., 120 ft. temporary hangar, boiler house, Advanced Twin Engine Flying School. $10,000.

Bids Asked December 11

Calif., Palm Springs—AIRPORT GRADING, etc.—U. S. Eng., 751 S. Figueroa St., Los Angeles, clearing, grading, paving, Palm Springs Airport, CAA program C. Over $25,000.

†**Kan., Kansas City**—RUNWAY, etc.—U. S. Eng., 601 Davidson Bldg., Kansas City, Mo., additional runway (NESW), 2 taxi strips, drainage lines, Fairfax Airport. $400,000. CD 11/6—ENR 11/13.

Bids Asked About December 12

†**N. M., Albuquerque**—AIRFIELD—U. S. Eng., Caddoa, Colo., additional airport bldgs., imprvs., 60x150 ft. warehouse, 76x120 ft. motor repair shop, 24x55 ft. storehouse, etc. $150,000. CD 11/12—ENR 11/20.

Bids Asked December 16

N. C., New Bern—AIRPORT IMPROVEMENTS—U. S. Eng. Wilmington, clear, grub, grade, drain, and pave runways, taxiways, City-County Airport, near here; adv. ENR 11/27.

†**R. I., Quonset Point** — SUBMARINE POWER and CABLE LINE—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., 10,000 ft. submarine power and telephone cable line from Quonset Point to Hope Island. Spec. 10728.

Texas—RURAL ELECTRIC LINES—Hall County Electric Co-operative, Inc., T. E. Lenoir, Memphis, 186 mi. rural electric power lines, Hall, Briscoe, Motley, Donley, Childress, Collingsworth Counties. $133,000 REA allot. C. C. Cox, Oliver-Eakle Bldg., Amarillo, engr. CD 11/17—ENR 11/20.

Bids Asked December 19

New York—SHAFT, etc.—New York City Tunnel Auth., A. B. Jones, chn., 200 Madison Ave., New York, Governors Island shaft and tunnels of Brooklyn-Battery Tunnel; adv. ENR 11/27.

Bids Asked December 22

†**S. C., Charleston**—WHARF—Pub. Wks. Officer, Navy Yard, Charleston, converting old ferry wharf into navy landing also constructing landing floats, Gaillard St., Spec. 10662. $100,000.

LOW BIDDERS

†**Nev., Las Vegas**—TRACK—U. S. Eng., 751 S. Figueroa St., Los Angeles, Nov. 17, placing 21,800 lin. ft. track furnished by owner, 54,000 cu. yd. grading, 14,000 lin. ft. ditching, from Gibbons & Reed, 259 W. 3 St. S., Salt Lake City, Utah, **$89,968.** CD 11/11.

CONTRACTS AWARDED

Arkansas and **Missouri**—POWER LINE—Arkansas Power & Light Co., Pine Bluff, Ark., construction, completion 55 mi. power line from Norfolk, Ark., to Forsythe, Mo., own forces. **$450,000.** R. R. Pittman, c/o owner, ch. engr. CD 9/10—ENR 9/18.

Ark., Walnut Ridge—POWER DISTRIBUTION SYSTEM—Arkansas Missouri Power Co., rebuilding power distr. sys. Owner builds. **$25,000.**

Ill., La Salle—RAILROAD GRADING—Chicago, Rock Island & Pacific R.R., La Salle St. Sta., Chicago, W. H. Hillis, asst. ch. oper. off., grading about 50,500 cu. yd., to Foley Bros., Inc., New York Bldg., St. Paul, Minn.; track installation, own forces. Total est. **$75,000.**

★†**La., New Orleans**—FLOATING DRYDOCK—Todd-Johnson Dry Docks, Inc., Hinds Lane Wharf, 18,000 ton brick, steel floating drydock, to Chicago Bridge & Iron Co., 1305 W. 105 St., Chicago, Ill. Est. **$2,500,000.** Defense Plant Corp. will finance. Frederic R. Harris, Inc., 27 William St., New York, N. Y., engrs. CD 7/31—ENR 8/7.

†**Mass., Boston** — QUAY WALL — Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., concrete exten. quay wall, Charlestown Navy Yard, to John Forward, 38 Powder House Rd., Medford. **$110,000.**

Mich., Sault Ste. Marie—AIRPORT—H. A. Sherman, city mgr., airport. **WPA. $243,000.** CD 9/11—ENR 9/18.

Miss., Starkvillle—RUNWAYS, etc.—U. S. Eng., Mobile, Ala., runways, taxiways, to Shuptrine Constr. Co., Hattiesburg, **$360,399.** CD 10/21—ENR 10/23.

Mont., Missoula—RUNWAYS—Exten. runways, airport. **WPA. $150,000.** CAA. CD 10/31—ENR 11/6.

N. J., Camden—PARK IMPROVEMENTS—Camden Co. Park Comn., Court House, imprv. parks, excavating, grading, landscaping, drainage, roads, etc., **WPA. $71,300.** G. R. Swinton, 930 Atlantic Ave., Atlantic City, WPA engr. CD 3/27—ENR 4/3.

†**N. J., Fort Monmouth**—LANDSCAPING, etc.—Con. Q.M., landscaping, grading, timber bridge. **WPA. $57,250.** W. D. Cougle, 1102 S. Broad St., Trenton, WPA and owner's engr. CD 10/31—ENR 11/6.

UNCLASSIFIED (Contracts Awarded, Cont'd.)

N. J., Garfield—LANDSCAPING, etc.—Imprv. City Hall site, landscaping, excavating, grading, watermains, etc., **WPA. $54,198.** C. Malstrom, Orange and N. 6 Sts., Newark, WPA engr. CD 11/10—ENR 11/13.

N. J., Montclair—LANDSCAPING, etc.—Bd. Educ., Town Hall, excavating, grading, landscaping, drainage, curbs, etc., school grounds, **WPA. $59,175.** C. Malstrom, Orange and N. 6 Sts., Newark, WPA engr. CD 11/11—ENR 11/13.

N. J., Newark—AIRPORT IMPROVEMENTS—22,000 sq. yd. bituminous concrete on existing **waterbound macadam surfacing runway,** airport, to Highway Corp., 24 Commerce St. **$25,000.** A. Armstrong, Administration Bldg., Newark Airport, engr.

★**†N. J., North Bergen**—FLOATING DRYDOCK—Robins Drydock & Repair Co., 1 Bway., New York, N. Y., 18,000 ton brick, steel floating drydock, Hudson River, to Harris Structural Steel Co., 419 4 Ave., New York, N. Y., $2,500,000. Defense Plant Corp. will finance. Frederic R. Harris, 27 William St., New York, N. Y., engrs.

N. J., Nutley—PARK IMPROVEMENTS—Grading, landscaping, etc., parks. **WPA. $52,500.** D. Shepherd, town engr. CD 7/23—ENR 7/31.

N. J., Orange—PLAYGROUND IMPROVEMENT — Imprv., modernizing playgrounds, grading, landscaping, drainage, water lines, retaining walls, tennis courts, concrete curbs, walks, running track, **WPA. $53,732.** K. Crane, Town Hall, town engr. CD 11/11—ENR 11/13.

N. J., Pequannock—RECREATIONAL CENTER—Recreational center, clearing, grubbing, grading, running track, baseball diamond, catch basins, fence, etc., Newark and Pompton Tpke., **WPA. $50,100.** C. Malstrom, Orange and N. 6 Sts., Newark, WPA engr. CD 11/10—ENR 11/13.

N. J., West New York—PARK IMPROVEMENTS—Imprv. Memorial Park, roller and ice skating rink, retaining wall, etc., **WPA. $50,091.** C. Malstrom, Orange and N. 6 Sts., Newark, WPA engr. CD 11/10—ENR 11/13.

N. Y., Bellaire—PLAYGROUND—Bd. Educ., 49 Flatbush Ave., Brooklyn, playground, sidewalk, landscaping, 89 Ave., 207 and 208 Sts. **WPA. $57,129.** W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., Brooklyn—PLAYGROUND, etc.—Dpt. Parks, Arsenal Bldg., Central Park, 5 Ave. and 64 St., New York, playground and comfort station, adjacent to P.S. 44, 420 Madison St. **WPA. $203,236.** W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., New York—PLAYGROUND RECONSTRUCTION, etc.—Dpt. Parks, Arsenal Bldg., Central Park, 5 Ave. and 64 St., playground reconstruction and addn., E. 182 St., Belmont and Crotona Aves., **$140,082;** playground and comfort station, 225 St. near White Plains Rd., **$106,660,** both in Bronx Boro; playground, East River Dr., 102 to 105 Sts., **$91,556,** Manhattan Boro. **WPA.** Grand total $338,298. W. W. Johnstone, 70 Columbus Ave., dir. Div. Operations.

N. Y., Ridgewood (sta. Brooklyn)—PLAYGROUND, etc.—Dpt. Parks, Arsenal Bldg., Central Park, 5 Ave. and 64 St., New York, playground and comfort station, Seneca Ave. and 75 St. **WPA. $193,349.** W. W. Johnstone, 70 Columbus Ave., New York, dir. Div. Operations.

N. D., Grand Forks—AIRPORT HANGAR—Hangar. **WPA. $60,000.** A. F. Hulteng, city engr.

Okla., Pensacola—FISH HATCHERY—State Fish & Game Comn., Oklahoma City, state fish hatchery, Grand River, near here, Mayes Co. **WPA. $180,000.** C. A. Hines, Capitol, Oklahoma City, engr.

Ore., Ontario—RUNWAYS—2 runways, **WPA. $225,000.**

†Ore., North Bend—SEAPLANE RAMP—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., seaplane ramp, **WPA, $52,736.**

Ore., Redmond — AIRPORT GRADING — Grading, surfacing, etc. airport, **WPA. $318,000.**

Pa., Cambridge Springs—GAS FIELD DEVELOPMENT, etc.—H. F. White, et al., Cambridge Springs, developing natural gas field, incl. drilling deep wells, connecting pipelines, trunk pipeline into city, distr. mains, etc., east of here, own forces. **$60,000-$75,000.** CD 11/11—ENR 11/13.

Pa., Oil City—LINE FACILITIES, etc.—Penna. Telephone Corp., H. M. Engh, genl. mgr., 20 E. 10 St., Erie, imprv. line facilities, circuits, conduits, expanding facilities, etc., own forces. **$150,000.** CD 11/10—ENR 11/13.

Tex., Beaumont—AIRPORT—Jefferson Co., c/o Judge, additional work, Midway airport, removing 260,000 cu. yd. dirt for new runways, to McGinnis Bros., 2104 Leeland St., Houston. **$78,000.**

Tex., Freeport—LUMBER YARD—New River Development Co., Freeport, and c/o F. A. Hunter, of Hunter Realty Co., 2808 Sunset Blvd., Houston, lumber yard. Owner builds. **$50,000.**

Tex., Galveston—BEACH IMPROVEMENTS—B. Harris, mayor, Stewart Beach imprvs., general landscaping, beautifying, general drainage, walks, etc., **WPA. $100,000.**

†Tex., San Antonio — FIELD IMPROVEMENTS—Con. Q.M., Brooks Field, additional miscellaneous work in military area, drainage, drainage structures, building streets, concrete sidewalks, etc., Brooks Field. **WPA. $74,981.**

†Tex., San Antonio — FIELD IMPROVEMENTS—Con. Q.M., Randolph Field, additional field imprvs., fill in, streets, sidewalks, drainage, etc., Randolph Field. **WPA. $136,816.**

†Tex., San Antonio—RUNWAY—U. S. Eng., Santa Fe Ry. Bldg., Galveston, runway work, grading, draining, leveling, hard paving. **WPA. $275,000.** Est. $300,000.

†Tex., Waco—HANGARS—U. S. Eng., Federal Bldg., Galveston, 2 AC hangars, 184 ft. demountable type, to F. M. Reeves, Inc., and Cage Bros., 300 Arlington Ave., Austin. **$119,975.** Est. $100,000. Bids 11/6. CD 10/28—ENR 10/30.

Wash., Bremerton — AIRPORT IMPROVEMENTS—U. S. Eng., Central Bldg., Seattle, grading, paving, draining and light runway, airport, supplemental agreement W-869-Eng. 2489, to K. L. Goulter, 212 W. Hudson St., Seattle. **$242,253.** CAA. CD 8/21—ENR 8/28.

Wash., Dallesport—AIRPORT—U. S. Eng., Pittock Blk., Portland, Ore., runway and taxiway addns., The Dalles, Ore. Municipal Airport, under supplemental agreement W-698-Eng. 1784, to Leonard & Slate, Multnomah, Ore. **$148,455.** CD 8/25—ENR 8/28.

Ont., Peterborough — DEPOT — Dominion Govt., Ottawa, Ont., exhibition park depot accommodation and facilities, day labor under supervision District Engineer, Kingston. **$150,000.** Dpt. National Defense, Ottawa, archts. G. W. Wright, Peterborough, engr.

Ont., Windsor—CHIMNEY — Canadian Industries, Ltd., 2780 Sandwick St., erecting 228 ft. radial brick chimney and wrecking present stack, to Canadian Custodis Chimney Co., 1101 Yonge St., Toronto. Est. **$25,000.**

LATIN AMERICA

Mexico—Scrita, Education Publica, Mexico, D.F. (Arentina, 45) plans by Mario Pani, Alfonso Pallares, Liega, 10, Mexico, D.F., grand national public library to house National Academy of Music, National Archaeological museum, etc., in Mexico City, $2,500,000*** Scrita. de A.P., Mexico, D.F., plans by Luis E. Ruiz, Xrita de A.P., Mexico, general hospital, in San Luis Potosi, $215,000.

Mexico—National Railways of Mexico, L. Reina, ch. engr., Mexico City, plans reconditioning National Tehuantepec R.R. from Puerto Mexico on Gulf of Mexico to Salina Cruz on Pacific Coast, about 190 mi. $700,000.

Mexico, El Salto—C. N. de I. Balderas, 101, Mexico, D. F., plans irrigation dam to impound 11,000,000 cu. meters water to fertilize 1,248 hectares. $610,000.

PUBLIC BUILDINGS

PROPOSED WORK

†Ala., Childersburg—Bd. Educ. plans by Chas H. McCauley, Jackson Bldg., Birmingham, school, Docket Ala. 1-126. **DPW.**

†Ala., Childersburg—Bd. Educ. Talladega County, plans by Chas. H. McCauley, Jackson Bldg., Birmingham, school, Docket Ala. 1-150. $50,000. **DPW.** CD 10/22—ENR 10/30.

†Ala., Mobile—Pub. Bldgs. Admin., 7 and D Sts. S.W., Wash., D. C., 1410 defense housing units.

†Ala., Talladega—City Bd. Educ., plans by Chas. H. McCauley, 706 Jackson Bldg., Birmingham, Junior High School, Docket Ala. 1-121. $190,500. **DPW.** CD 11/14—ENR 11/20.

★**†Ariz., Miami**—Castle Dome Copper Co., subsidiary Miami Copper Co., 61 Bway., New York, N. Y., copper plant. $9,000,000. Defense Plant Corp. will finance.

†Ark., Dyess — Farm Security Admin., Donaghey Bldg., Little Rock, rejected bids Nov. 6, farmstead unit bldgs. CD 10/22.

★**†Ark., Malvern**—Aluminum Co. of America, Gulf Bldg., Pittsburgh, Pa., aluminum plant, 128,000,000 lb. annual capacity, at Lake Catherine, near here, for War Dpt. $33,000,000. Defense Plant Corp. will finance. CD 8/25—ENR 8/28, under Arkansas.

★**†Calif., Los Angeles**—Bohn Aluminum & Brass Corp., 1400 Lafayette Bldg., Detroit, Mich., aluminum extrusion plant. $1,753,000 for land and buildings, $3,785,000 for machinery and equip. Defense Plant Corp. will finance.

†Calif., Monterey—Con. Q.M., Fort Ord, completing plans reconstructing quartermaster bldg., utilities, etc.

★**†Calif., San Bernardino**—U. S. Eng., 751 S. Figueroa St., Los Angeles, U. S. Army Supply Depot, county airport. Est. between $15,000,000 and $20,000,000.

†Calif., San Miguel—San Miguel Union School Dist. of San Luis Obispo Co., school, Docket Calif. 4-910. $23,327. **DPW.**

★**†Calif., Vallejo**—Vallejo U[illegible] School Dist. plans by H. J. Devine, [illegible]n Bldg., Sacramento, addns. and new uni[illegible]mnasium and cafeteria) for Senior High [illegible] $450,000; Junior High School, $50[illegible] 1 story Steffen Manor School and 1 stor[illegible] Terrace No. 2 School, over $150,000. [illegible] Calif. 4-119, **DPW.** CD 9/19—ENR 9[illegible] plans by Masten & Hurd, 442 Post St., S[illegible]ancisco, rein.-con., wood frame school. $[illegible]

†Colo., Fort Logan—School Dist. [illegible] Arapahoe County, Denver, plans nearing [illegible]tion by V. H. Hornbein, Boston Bldg., [illegible] brick school, Docket Colo. 5-102. $[illegible] **DPW.** CD 9/16—ENR 9/18.

★**†Colo., Pueblo**—War Dpt., 20 [illegible]nd Constitution Ave., N.W., Wash., D[illegible] bomber school, 10 mi. from here. $10,00[illegible]

★**†Conn., Groton**—Coast Guard [illegible] Navy Dpt., Liberty Loan Bldg., 14 St. and Maine Ave. S.W., Wash., D. C., brick, st[illegible] training station, Avery Point, $1,936,000 appropriated.

★**†Conn., Mystic**—U. S. Maritime Comn., 14 St between E St. and Constitution Ave. N.W., Wash., D. C., brick, steel maritime school. $800,000.

★**Conn., Norwich** — E. Heilman, chn. Bd. Educ., plans by J. Malmfeldt, 36 Pearl St., Hartford, brick, steel Trade School, Platt Ave., Warren and Rockwell Sts. $270,000. Total $600,000 with equip. CD 8/28—ENR 9/4.

†Fla., Banana River—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., 160 defense housing units. CD 7/10—ENR 7/17.

†Fla., Cocoa—City, recreation bldg., Docket Fla. 8-125. $10,000. **DPW.**

†Fla., Key West—Key West Housing Auth., 210 defense housing units for USHA.

†Fla., Lakeland—Lake Housing Auth., 60 defense housing units, for USHA.

★**Fla., Miami Beach**—Plans by R. T. Pancoast, 1st Natl. Bank Bldg., and L. M. Dixon, 1630 Euclid Ave., municipal hospital, Alton Rd. $500,000. C. E. Neergaard, 41 E. 42 St., New York, N. Y., assoc. archt. CD 9/15—ENR 9/18.

†Fla., Starke—Bd. Public Instruction Bradford Co., plans by Sanford W. Goin & Forrest M. Kelly, Jr., Janesville, school, Docket Fla. 8-11. $111,801. **DPW.** CD 9/8—ENR 9/11.

★**Ill., Carbondale**—Illinois State Normal University, Carbondale, rejected bids Sept. 18, 3 story, bsmnt., brick, training school. About $500,000. CD 9/29—ENR 10/2.

★**Idaho, Idaho Falls**—Bonneville Co., Court House, Junior College. $500,000. Federal funds sought.

★**†Ill., Monsanto (Br. East St. Louis)**—American Zinc Co. of Illinois, Cookson Rd., East St. Louis, addns., expanding facilities, 17,000 tons electrolytic slab zinc and 7,200 tons retort slab zinc annually at plants in Monsanto and Fairmont City for War Dpt. $4,000,000. Defense Plant Corp. will finance.

Ia., Bettendorf—Defeated $115,000 bonds, school, for Bd. Educ. $230,000-$300,000. CD 10/28—ENR 10/30.

†Ind., Fort Wayne—School City of Fort Wayne, alterations, addns. Study School, Docket Ind. 12-130. $65,800. **DPW.**

★**†Ind., Newport**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., Wabash River Ordnance Works. $53,500,000 incl. equip. E. I. du Pont de Nemours, du Pont Bldg., Wilmington, Del., will operate. CD 11/18 under Clinton.

Kan., Kansas City—Installing power piping in connection with power plant addn. Over $25,000. Burns & McDonnell, 107 W. Linwood Blvd., engrs. CD 11/11—ENR 11/13.

†Ky., Louisville—Commonwealth of Kentucky, acting through and for use and benefit State Bd. Health, 3 story addn., alterations State Bd. Health Bldg., Docket Ky. 15-116. $179,856. **DPW.** CD 10/22—10/30.

La., Monroe—H. H. Benoit, mayor and W. D. H. Rodriqueg, comr. Finance & Utilities, power plant addn. $40,000. Burns & McDonnell, 107 W. Linwood Blvd., Kansas City, Mo., engrs.

★**†La., New Orleans—Yards** & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., Naval Ammunition Depot, near here. $2,400,000.

†Md., Baltimore—Maryland Drydock Co., Fairfield, plans by J. E. Greiner Co., 1201 St. Paul St., 1 and 2 story, 100 x 160 ft., brick, steel machine shop, concrete fdn., for Navy Dpt. CD 9/22—ENR 9/25.

Mass., Boston—School Bldg. Dpt., 28 Morman St., 3 story, bsmnt. addns. to Boston Trade and Michael J. Perkins Schools. $260,000.

★**Mass., Chicopee**—Chicopee Housing Auth., O. Savaria, chn., City Hall, postponed, bids to have been opened Dec. 6, 250 unit housing proj. Mass. 8-1, Fairview Ave. $1,159,000. USHA. C. A. Maguire & Assoc., 1515 Turks Head Bldg., Providence, R. I., engrs. CD 11/11—ENR 11/13.

★**Mass., Holyoke**—**Holyoke Housing** Auth., 56 Suffolk St., plans by McClintock & Craig, 458 Bridge St., 220 unit brick housing Project 2, Franklin, Pine and Chestnut Sts. $1,145,000. USHA. Site changed. CD 3/5—ENR 3/13.

★**†Mich., Adrian**—Bohn Aluminum & Brass Corp., 1400 Lafayette Bldg., Detroit, aluminum extrusion plant. $1,415,000 for land and buildings, $2,520,000 for machinery and equip. Defense Plant Corp. will finance.

PUBLIC BLDGS. (Proposed Work, Cont'd.)

†**Mich., Garden City**—School Dist. plans by Lyndon & Smith, 500 Murphy Bldg., Highland Park, school, Docket Mich. 20-139. $42,160. **DPW.** CD 10/28—ENR 10/30.

†**Mich., Lansing**—Edward W. Sparrow Hospital Assn., 1215 E. Michigan Ave., hospital addns., Docket Mich. 20-114. $425,270. **DPW.**

†**Mich., Warren** — School Dist. 5, Warren Twp., Macomb Co., school, Docket Mich. 20-121. $118,232. **DPW.**

†**Mo., Weldon Springs**—Consolidated School Dist. 2 of St. Charles Co., bids soon high school, near here, Docket Mo. 23-125, $123,500. **DPW.** E. R. Friton, Security Bldg., St. Louis, archt. CD 11/14—ENR 11/20, under St. Charles.

†**N. H., Portsmouth**—City, H. L. Moore, supt. Schools, bids soon 2 story, 78x146 ft. brick, steel school, Atlantic Heights, Docket N. H. 27-101. $182,200. **DPW.** Wells, Hudson & Granger, Main St., Hanover, archts. Charles A. Maguire, 1515 Turks Head Bldg., Providence, R. I., engr. CD 10/8—ENR 10/16.

†**N. H., Portsmouth** — Pub. Wks. Officer, Navy Yard, Portsmouth, bids soon brick oil storehouse. Spec. 10695.

N. J., Burlington—Burlington Housing Auth., City Hall, rejected bids Oct. 24, 140 unit, 2 story row housing, Proj. NJ 20-1. USHA. Will readvertise. L. S. Kaplan, 33 W. State St., Trenton, archt. CD 10/29—ENR 11/6.

N. J., East Orange—State, Quartermaster Genl. Dpt., State House, Trenton, brick, steel armory bldg. addn., North Munn Ave.

★**N. J., Jersey City**—Building addns., alterations, imprv. existing bldgs., Medical Center. $5,078,000. DPW funds sought. J. T. Rowland, 30 Journal Square, archt.

†**N. J., Newark**—Port Newark Shipbuilding Co., 17 Battery Pl., New York, N. Y., 1 story, 300x350 ft. frame mould loft bldg., 2 story, 100x300 ft. frame office bldg., 2 story, 75x150 ft. frame storage bldg., 1 story, 75x75 ft., frame power plant and gate house, Port Newark, for U. S. Maritime Comn.

N. J., Perth Amboy—Perth Amboy General Hospital, 530 New Brunswick Ave., plans by Aylin, Pierson, John MacWilliam, Assoc., 313 State St., new hospital, altering existing hospital, Groom St. $450,000.

†**N. J., Rockaway**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., storage bldg., exten. Picatinny Arsenal.

N. J., Trenton — State Dpt. Institutes & Agencies, State House, 3 housing units, at Vineland School for Girls. $350,000.

N. J., Woodbine—State Dpt. Institute & Agencies, State House, Trenton, 3 housing units, at Woodbine Colony for Boys. $350,000.

N. M., Albuquerque—C. Tingley, mayor, municipal auditorium. $300,000.

★†**N. M., Albuquerque**—U. S. Eng., 1 and Douglas Sts., N.W., Wash., D. C., additional barracks, housing facilities, Air Base Training Center. $500,000.

N. Y., Brooklyn—Dpt. P. Wks., Municipal Bldg., New York, market, Prospect Pl. $250,000.

★†**N. Y., Buffalo**—Buffalo Municipal Housing Auth., Perry St., plans by Backus, Crane & Love, 360 Delaware Ave., 200 (negro) housing units, for USHA. $1,000,000. CD 9/19—ENR 9/25.

★**N. Y., Callicoon**—Bd. Educ., Callicoon, plans by R. R. Graham, 25 Prospect St., Middletown, and bids soon high school. $635,000.

N. Y., Cassadaga—Bd. Supervs. Chautauqua Co., Mayville, plans by Beck & Tinkham, Bailey Bldg., Jamestown, tuberculosis sanitorium. $150,000 with equip.

★**N. Y., Cheektowaga**—Mutual Owneership Defense Housing Div., FWA., North Interior Bldg., Wash., D. C., 1050 defense housing units, Project 30037, $4,500,000.

★**N. Y., Corona (sta. Flushing)**—Bd. Educ., 49 Flatbush Ave. exten., Brooklyn, P.S. 157, Queens (Junior High School), vicinity 64 Ave. and 102 St. $1,190,500.

★**N. Y., Flushing**—Bd. Higher Educ., 695 Park Ave., New York, field house for Queens College. $660,560.

†**N. Y., Fort Niagara**—Con. Q. M., Fort Niagara, administration bldg.

†**N. Y., Massena**—Farm Security Admin., The Mall between 12 and 14 Sts. S.W., Wash., D. C., 1,000 prefabricated defense housing units. $250,000.

N. Y., New York—Dpt. P. Wks., Municipal Bldg., 8 Ave. Market, $200,000; Upper 1st Ave. market, $240,000.

★**N. Y., New York**—Dpt. P. Wks., Municipal Bldg., power plant, reconstructing and addns., Bellevue Hospital. $505,000.

N. Y., New York—Bd. Educ., 110 Livingston St., Brooklyn, altering 4 story school, 43 Oak St. $150,000. A. Rogers, c/o owner, engr.

†**N. Y., North Tonawanda**—City plans by F. J. and W. A. Kidd, 524 Franklin St., Buffalo, Graff Memorial Hospital, alterations, addns., Docket N.Y. 30-131, $383,840. **DPW.** CD 11/14—ENR 11/20.

†**N. C., Fayetteville**—Cumberland Co. plans by Basil G. F. Laslett, Fayetteville, hospital, Docket N.C. 31-138. $400,000. **DPW.** CD 11/3—ENR 11/6.

†**N. C., Jacksonville**—Onslow Co. plans by John J. Roland, Kingston, hospital, Docket N.C. 31-164. $160,470. **DPW.** CD 10/29—ENR 11/6.

N. C., Lenoir—Bd. Comrs. Caldwell Co., G. M. Goforth, chn., $392,500 bond election Jan. 20, for county and city school bldgs. CD 10/30—ENR 11/6.

†**N. C., Wilmington**—Bd. Managers James Walker Memorial Hospital, plans by Lynch & Foard, 202½ Princess St., hospital, Docket N.C. 31-901. **DPW.** CD 10/22—ENR 10/30.

O., Dayton—Dayton Osteopathic Hospital, Dr. H. M. Dill, pres., W. 2 St., raising funds and plans by W. Ray Yount, 3rd Natl. Bldg., 2 and 3 story, bsmnt., rein.-con., tile hospital, plain fdn., Plymouth St. $150,000. CD 1/14—ENR 1/16.

Okla., Weatherford — State Bd. Affairs, State Capitol Bldg., Oklahoma City, sketches by Winkler & Reid, Oklahoma Savings & Loan Bldg., Oklahoma City, administration bldg., Southwestern College of Diversified Occupations. $150,000.

†**Pa., Beaver Falls**—Babcock & Wilcox Tube Co., Beaver Falls, plant addn., 24,000 tons electric alloy steel ingot capacity. Over $100,000. Defense Plant Corp. will finance.

Pa., Erie—Comrs. Erie Co., Court House, jail. $150,000-$200,000. W. Supplee, co. engr.

†**Pa., Monaca**—Superior Steel Products Co., Monaca, plant for annealing alloy steel bars. $75,000 for land and bldgs., $150,000 for machinery and equip. Defense Plant Corp. will finance.

Pa., Williamsport—Comrs. Lycoming Co., Court House, court house and jail bldgs. Over $300,000. M. C. Krause, 10 W. 4 St., engr.

†**S. C., Spartanburg**—Spartanburg County plans by Lockwood-Green Engineers, Inc., Montgomery Bldg., remodeling old bldg. and constructing 4 story addn., Spartanburg General Hospital, Docket S.C. 38-156. $402,570. **DPW.** CD 11/3—ENR 11/6.

†**Tex., Amarillo**—State Health Dpt., Austin, masonry type health and clinic bldg., appurtenances, Tex. 41-387. $48,000. **DPW.** Shingle & Scott, c/o Littlefield Bldg., Austin, engr.

Tex., Canyon—West Texas State Teachers College c/o Dr. Hill, pres., Canyon, indefinitely postponed taking bids 2 story, brick, stone science bldg. $150,000. M. O. Carder, Fisk Bldg., Amarillo, archt. CD 11/3—ENR 9/25.

Tex., Dallas—Highland Park School Bd., plans by M. Lemmon, Tower Petroleum Bldg., Junior High School unit and mechanical trades school facilities, $150,000 bonds voted; plans by Flint & Broad, Burt Bldg., 1 story high school, $150,000.

★†**Tex., Galveston**—Monsanto Chemical Co., 1700 S. Second St., St. Louis, Mo., chemical products factory in connection with synthetic rubber production. $2,200,000. Defense Plant Corp. will finance.

Tex., San Antonio—Defeated $490,000 bonds, Junior College bldg. for Junior College Organizing Com., 419 S. Alamo St. O. P. Schnabel, chn. Plans new bond election soon. CD 10/28—ENR 10/30.

†**Utah, Ogden**—U. S. Eng., Hill Field, postponed indefinitely bids to have been opened Nov. 21, A.C. airplane repair shop, Unit 2, Hill Field. CD 11/5—ENR 11/13.

†**Washington**—Dpt. Interior, C St. between 18 and 19 Sts. N.W., Wash., D. C., gaging station to measure flow of Columbia River, International Boundary, head of Grand Coulee Lake. $10,000.

†**Wash., Everett**—City, demolishing, repairing bldg. for recreation center, Wash. 45-136. $56,724. **DPW.** A. E. Erickson, Commerce Bldg., archt. G. G. Paine, City Hall, engr.

†**Wash., Poulsbo**—Union High School Dist. 4, Kitsap Co., bids soon, 2 story, bsmnt. high school addn., Docket Wash. 45-115. $175,000. **DPW.** F. B. Stephen, Smith Tower, Seattle, archt. CD 10/8—ENR 10/16.

†**Wash., Silverdale** — Union High School Dist. 6 plans by Naramore & Brady, Dexter Horton Bldg., Seattle, 70x218 ft. frame, brick veneer high school, Wash. 45-123. $68,959. **DPW.** CD 10/9—ENR 10/16.

★†**Wis., Milwaukee** — A. O. Smith Corp., 3533 N. 27 St., plans 281x561 ft., 223x601 ft. and 176x300 ft. plant addns. $877,000. Total including equip. $2,760,132. Defense Plant Corp. will finance.

†**Alaska, Ketchikan**—City plans by H. B. Foss Co., Juneau, 2 story, 46x50 ft. rein.-con. health center, Docket 50-112. $40,000. **DPW.** CD 11/3—ENR 11/6.

BIDS ASKED

Bids Asked November 28

†**Neb., Fort Robinson**—Con. Q. M., 14 and Farnum Sts., Omaha, 2 veterinary wards and veterinary hospital sheds; adv. ENR 11/27.

Bids Asked December 1

★†**N. J., Dover**—Pub. Bldgs. Admin., 7 and D Sts. S.W., Wash., D. C., 300 defense housing units, S. Salem St., Project 28101X. $1,050,000. L. A. Simon, 7 and D Sts. S.W., Wash., D. C., archt. CD 11/24.

Bids Asked December 2

★†**Conn., Bristol**—Div. Defense Housing, FWA, Fairfield, 200 defense housing units, Jerome Ave., Project 6091X. $750,000. Douglas Orr, 96 Grove Ave., New Haven, archt. CD 10/7—ENR 10/9.

†**Conn., Windsor Locks**—U. S. Eng., 819 Industrial Trust Bldg., Providence, R. I., brick, steel, concrete ordnance units, Windsor Locks Air Base. CD 11/7—ENR 11/13.

Ind., Fort Wayne — Fort Wayne Housing Auth., A. H. Schaaf, chn., J. Essig, exec. secy., 62 dwelling unit housing, Project Ind. 3-1A, Catalpa, Culbertson, Beadell and Graeter Sts. $155,000. USHA. A. M. Strauss, 415 Cal-Wayne Bldg., archt. CD 11/12—ENR 11/20.

Kan., Lawrence—State Bd. Regents, State House, Topeka, mineral resources bldg., University of Kansas. $396,000. R. Stookey, Topeka, state archt. CD 5/14—ENR 5/22.

Mich., Battle Creek—F. J. Skidmore, secy. Bd. Educ., Urbandale School Dist., brick, rein.-con., stone, steel school. $150,000. L. J. Sarvis, 201 Bailey Bldg., archt. Bids 10/30 rejected. CD 11/18—ENR 10/27.

†**Pa., Indiantown Gap**—Con. Q.M., 24 ft. concrete block addns. to 4 mess halls; adv. ENR 11/27.

†**R. I., Quonset Point**—Construction Officer, Naval Air Base, Quonset Point, 4-pump brick service station unit, car laundry, etc., Spec. 10657; oil storage tank, Spec. 10732. CD 10/15—ENR 10/23, under Unclassified.

Bids Asked December 3

†**Mass., Boston**—Pub. Bldgs. Admin., 7 and D Sts. S.W., Wash., D. C., laboratory imprvs., addn. for wood testing.

†**N. J., Cape May**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., earth covered magazine, Naval Air Station, No. 10413.

†**O., Cleveland**—National Advisory Com. for Aeronautics, E. Sharp, constr. administrator, Langley Field, Hampton, Va., 2 story, 58x267 ft., brick, steel, concrete office bldg. for engine research laboratory, Cleveland Airport. Over $150,000.

Bids Asked December 4

N. C., Asheville—Asheville Housing Auth., 82 unit housing, Project N.C. 7-1. USHA. H. Gaines, Asheville, archt. CD 11/24—ENR 11/20.

†**Pa., Midland** — Beaver County Housing Auth., R. Bennett, chn., 119 9 St., Monaca, 30 defense housing units, Project 36060X, for USHA. Extended date. A. Martsolf, G. E. Trent & H. Bradley, 9 St., Monaca, archts. E. S. Tower, Investment Bldg., Pittsburgh, engr. CD 11/12—ENR 11/20.

†**Tex., Wichita Falls**—U. S. Eng., Citizens Bldg., Denison, hospital sprinkler sys. for 44 bldgs., Sheppard Field. $70,000.

Bids Asked About December 5

Tex., Beaumont — Bd. Educ., Lamar College, 1 story, bsmnt., 135x196 ft. college bldg. and auditorium. $150,000. W. B. Livesay, Annex San Jacinto Bldg., archt. CD 9/26—ENR 10/2.

Tenn., Nashville—Nashville Housing Auth., 212 Warner Bldg., administration service bldgs., for J. A. Cayce Homes, Proj. Tenn. 5-1 and 5-1-A and J. C. Napier Homes, Proj. Tenn. 5-2 and 5-2-A. Extended date. CD 11/12—ENR 11/20.

Bids Asked December 6

★**Tex., Stephenville**—Bd. Directors A. M. College, College Station, girls' and boys' dormitories, John Tarleton Agricultural College. $650,000. A. C. Finn, Bankers Mortgage Bldg., Houston, archt. CD 10/17—ENR 10/23.

Bids Asked December 7

†**R. I., Quonset Point**—Construction Officer, Naval Air Base, Quonset Bay, dispensary unit addns., with service sys., etc., Spec. 10729.

Bids Asked December 8

†**Pa., Aliquippa**—Beaver County Housing Auth., R. Bennett, chn., Court House, Beaver, 50 defense housing units, Project 36058X, for USHA. Extended date. A. Martsolf, G. E. Trent & H. Bradley, 9 St., Monaca, archts. E. S. Tower, 213 Investment Bldg., engr. CD 11/12.

†**Pa., Charleroi**—U. S. Eng., Federal Bldg., Pittsburgh, 1 and 2 story warehouse, Lock 4, U. S. Boatyard. CD 1175—ENR 11/13.

Bids Asked December 9

Pa., Chester—Chester Housing Auth., 5 and Welsh Sts., 350 unit housing, Project Pa. 7-3. USHA. Extended date. CD 11/11—ENR 11/13.

Pa., Cresson—Pennsylvania General State Auth., 2 and Locust Sts., Harrisburg, surgical unit bldg., Cresson Sanatorium.

Utah, Salt Lake City—U. S. Eng., 751 S. Figueroa St., Los Angeles, Calif., chapel, oil storage bldg., ordnance storage bldg., alterations existing warehouse, utilities for bldgs., Salt Lake City Military Airport.

Bids Asked December 10

Pa., Uniontown—Fayette County Housing Auth., H. Mulligan, exec. dir., Union Trust Bldg., 200 uni., 1 story Bierer Wood Acres housing, Project Pa. 15-1, South Union Twp., near here. USHA. Extended date. J. H. Harmon, E. R. Johnson and H. W. Altman, 305 Union Trust Bldg., archts. J. F. Triggs, Berger Bldg., Pittsburgh, site planning engr. CD 11/11—ENR 11/13.

Bids Asked December 11

†**Arizona-California** — Bureau Reclamation, Custom House, Denver, Colo., furnishing, del. horizontal oil storage tank and vertical oil make up tank, welded-plate-steel, both for switchyard, Parker power plant, Parker Dam Project, Spec. 1590-D.

PUBLIC BLDGS. (Bids Asked, Cont'd.)

Bids Asked December 12

Ark., North Little Rock—North Little Rock Housing Auth., 92 unit housing, Project Ark-2-2. USHA. CD 7/24—ENR 7/31.

Ky., Owensboro—Owensboro Municipal Housing Comn., 218½ W. 3 St., 41 unit housing, community and administration bldgs. Proj. Ky. 9-1, and 8 dwellings, administration bldg., Proj. Ky. 9-2. **Incl. sewers, lighting, gas, etc.** Over $400,000. USHA. Change of date. CD 11/11—ENR 11/13.

★**†Mont., Fort Peck**—U. S. Eng., 1201 Davidson Bldg., Kansas City, Mo., power house superstructure and surge tank bldg., installing penstocks and butterfly valves for Fort Peck Project. $2,000,000. Extended date. CD 9/25.

Bids Asked About December 15

★**D. C., Wash.**—Alley Dwelling Auth., 1300 E St. N.W., Parkside Dwellings, 373 low rent units, Project D.C. 1-11, Barnes Lane between Kenilworth Ave. and Fort Dr. Approx. $1,651,800. USHA. CD 11/10—ENR 11/16.

Fla., Orlando—Orange County Hospital Bd., Dr. G. Osincup, chn., Orange General Hospital, hospital addns. Over $150,000. Associated Architects, 6 W. Church St., archts. A. B. Herndon, Orlando, city engr.

Ore., Oregon City—Clackamas Co. Housing Auth., 100 unit housing, Project Ore-1-1R. USHA. Extended date. CD 11/12—ENR 11/20.

Bids Asked December 16

†Ga., Savannah—Pub. Wks. Officer, Navy Yard, Charleston, S. C., barracks, sick bay, mess hall, galley, heating plant and brig, pier exten., signal tower, radio masts, gas and oil storage, renovating old bldgs., roads, services to bldgs., Sect. Base 4, Cockspur Island, Spec. 10595. Extended date. CD 11/13—ENR 11/20.

Tex., Galveston—Galveston Housing Auth., City Hall, 214 unit housing, Project Tex.-17-1. USHA. Extended date. CD 11/12—ENR 11/20.

Bids Ased December 17

†Colo., Denver—U. S. Eng., 1709 Jackson St., Omaha, Neb., telephone and telegraph bldg.

Bids Asked December 18

†Arizona-California-Nevada—Bureau of Reclamation, Customhouse, Denver, Colo., furnishing, del. bus structures, oil circuit breakers, also generator neutral reactor for Unit N-7 or Units N-7 and N-8, in Boulder power plant, Boulder Canyon Project, Spec. 1017.

†California—Bureau Reclamation, Old Post Office Bldg., Sacramento, Calif., residences, Coleman Station for migratory-fish control, Kennett Div., Central Valley Project, Spec. 1588-D.

†Tex., Orange—Orange Independent School Dist., c/o J. W. Edgar, supt., high school, Tex. 41-135. $499,491. **DPW.** Extended date. C. H. Page & Son, Enfield-Gracy Bldg., Austin, archts. CD 11/13—ENR 11/20.

Bids Asked About December 20

Colo., Denver—Denver Housing Auth., City-County Bldg., 32 two story, brick, masonry housing units, Arapahoe Courts. $392,000. USHA. J. K. Monroe, Bway. and Curtis Sts., and R. Ervin, 920 Monaca Blvd., archts. CD 11/12—ENR 11/20, under BA.

Bids Asked December 23

†D. C., Wash.—Pub. Bldgs. Admin., 7 and D Sts. S.W., construction (except elevators) materials testing laboratory, National Bureau Standards.

Bids Asked January 8

N. Y., Utica—Adjutant General, Div. Military & Naval Affairs, Executive Dpt., Capitol, Albany, Infantry Armory addns., reconstruction. $246,800.

Bids Asked

★**†Conn., Bristol** — Div. Defense Housing, FWA, Fairfield, 200 defense housing units, Jerome Ave., Project 6091X. $750,000. Extended date. Douglas Orr, 96 Grover St., New Haven, archt. CD 11/18—ENR 11/27.

†Va., Quantico—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N. W., D. C., exten. F.B.I. barracks and school facilities, magazines, transmitter bldg., roads and services, Marine Barracks, Spec. 10604.

†Wash., Bremerton—Defense P. Wks. Div., Alaska Bldg., Seattle, USO bldg. $118,000. CD 10/15—ENR 10/23.

LOW BIDDERS

Calif., Los Angeles—Housing Auth. of City of Los Angeles, 1250 Western Pacific Bldg., 1031 S. Bway., Nov. 18, 100 unit housing, Rose Hill Courts, from L. F. Dow Co., 8743 Sunset Blvd. **$219,000.** CD 10/31—ENR 11/6.

Fla., Daytona Beach—Daytona Beach Housing Auth., Nov. 7, 66 unit Halifax Park housing, Project Fla. 7-2, from Langston Constr. Co., Orlando, **$186,500.** CD 10/24—ENR 10/30.

★**La., Shreveport**—Shreveport Housing Auth., Nov. 14, Elamito Terrace Housing, Project La. 2-1, comprising 26 dwelling bldgs., containing 210 dwelling units, etc., from Central Contg. Co., 409 Construction Bldg., Dallas, Tex. **$903,000.** CD 10/20—ENR 10/23.

†Md., Aberdeen Proving Ground—Con. Q.M., Nov. 14, assembly shop, from Hadley Contg. & Constr. Co., 1213 Wood St., Phila., Pa. **$485,124. CD 10/29—ENR 11/6.**

†Mich., Redford (Sta. Detroit)—Redford Union School Dist. 1, Wayne Co., Puritan and Lexington Sts., Redford Twp., Nov. 10, general contract brick, steel stone, rein.-con. high school, Docket Mich. 20-108, from Reisdorf & Brewe, 807 Donovan Bldg., Detroit. **$192,516** ***plumbing and heating, from A. J. Reah, Imlay City. **$44,800. DPW.** CD 10/29.

†Mo., Fort Leonard Wood—Con. Q.M., Nov. 12, barracks, mess hall, administration bldg., storehouse, recreational bldg., from McCarthy Bros. Constr. Co., 4903 Delmar Blvd., St. Louis. **$61,340.** CD 11/10.

★**N. Y., Central Islip**—Comr. Mental Hygiene, State Office Bldg., Albany, Nov. 13, general contract infirmary bldg., Central Islip State Hospital, from Amsterdam Building Co., 430 Lexington Ave., New York, **$639,900*****heating, from Dierks Heating Co., 43-32 33 St., Long Island City, **$53,990***** sanitary work from Endres Plumbing Corp., 31-55 29 St., Long Island City, **$45,200*****electrical work, from Bevis & Newman, Montauk Hy., West Hampton, **$34,193.** CD 9/17—ENR 9/25.

†Pa., Clairton—Div. Defense Housing, FWA, 811 Vermont Ave. N.W., Wash., D. C., Nov. 13, general contract 132 defense housing units, Project 36152X, from Navarro Corp., 6219 Broad St., Pittsburgh. **$575,000.** CD 11/11.

†Wash., Seattle—Con. Q. M., 1519 Alaskan Way, Nov. 19, cantonment, Fort Lawton, Inv. QM 7212-42-6, from Sound Constr. & Eng. Co., Northern Life Tower. **$188,500.** CD 11/12—ENR 11/20.

CONTRACTS AWARDED

★**†Ark., Pine Bluff**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., design and construction Pine Bluff Arsenal for Chemical Warfare Service, near here, to Sanderson & Porter, 52 William St., New York, N. Y. **$8,625,000.** CD 10/23—ENR 10/30.

†Calif., Fort Ord—Con. Q.M., 3 warehouses, etc., Inv. CA 9-6665-42-7, to D. W. Nicholson Corp., 357 12 St., Oakland. **$54,500.** CD 11/17—ENR 11/20.

★**†Conn., Naugatuck**—Naugatuck Chemical Div. U. S. Rubber Co., Naugatuck, 2 story, 80 x 180 ft., brick, steel, concrete factory, also tanks, substation, administration bldg., to W. J. Megin, Inc., 51 Elm St., Naugatuck; underground piping, to C. N. Flagg & Co., Inc., 79 Griswold St., Meriden. Est. **$2,250,000.** Defense Plant Corp. will finance. Bids 11/6. CD 11/5.

★**†Conn., Groton**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N. W., Wash., D. C., 4 story, 65x223 ft. and 2 story, 64x124 ft. warehouse, laundry, fire station, garage, all brick, submarine base, to F. H. McGraw & Co., 780 Windsor St., Hartford, **$1,000,000.** CD 10/15—ENR 10/23.

★**†Ga., Savannah**—U. S. Eng., P. O. Bldg., bldgs., Savannah Airbase, to Henry A. Ivey, Decatur. **$883,971.** CD 10/31—ENR 11/6.

★**Ill., Chicago**—Chicago Housing Auth., 208 S. LaSalle St., 586 **unit housing, Frances** Cabrini Homes, to S. N. Nielsen Co., 3059 W. Augusta Blvd., **$2,478,470.** Bids 10/15, awarded 11/15. CD 10/28—ENR 10/30 under LB.

†Ill., Rock Island—U. S. Eng., Rock Island, motor shop and engineer depot, Arsenal Island, to Coath & Goss, Inc., 228 N. La Salle St., Chicago, **$181,685.** Bids 10/22. ENR 10/14—ENR 10/16.

†Me., Portland—Con. Q.M., barracks, mess hall, roads, water and sewer lines, Fort Lyon, to M. Spinelli & Son, 38 Chauncey St., Boston, Mass., **$162,800.**

★**†Mass., Indian Orchard**—Chapman Valve Co., Pinevale, Indian Orchard, design and construction 1 story, 75 x 300 ft., brick, steel machine shop, 1 story 480 x 600 ft. foundry, to Stone & Webster Eng. Corp., 49 Federal St., Boston. Est. **$3,000,000.** Defense Plant Corp. will finance.

Mich., Ann Arbor—International Industries, Inc., design and construction 1 story, brick, steel, rein.-con. plant for manufacture munitions for War Dpt., to The Austin Co., 429 Curtis Bldg., Detroit. Est. **$55,900.** Defense Plant Corp. will finance. CD 9/23—ENR 9/25.

†Miss., Camp Shelby—Con. Q.M., 9 theatre bldgs., to Flint-Jordan Constr. Co., 941 College St., Jackson. **$585,000.**

★**†N. H., Laconia**—Scott & Williams, Inc., 266 Union St., 1 story, bsmnt., 300 x 300 ft., concrete, brick, steel factory, for mfg. aircraft equip., for War Dpt., to Brown & Mathews, Inc., 122 E. 42 St., New York, N. Y., approx. **$600,000.** Defense Plant Corp. will finance. CD 11/14—ENR 11/20.

†N. J., Bendix — Bendix Aviation Corp., Eclipse Aviation and Pioneer Instrument Dr., mfg. bldg., to Brown & Matthews, Inc., 122 E. 42 St., New York, N. Y. Est. **$400,000.** Defense Plant Corp. will finance. H. E. Beyster Corp., General Motor Bldg., Detroit, Mich., archt. and engr. CD 10/6—ENR 10/9.

★**†N. J., Dover**—Con. Q.M., fifteen 1 and 2 story, masonry arsenal bldgs., incl. storage bldgs., chemical laboratory locker and loading bldgs., packing house addn., coal storage facilities, sewer, water, electric lines, Picatinny Arsenal, to La Sala Maon Corp., 155 E. Masholu Pkwy. N., New York, N. Y. **$529,000.** Bids 11/4. CD 11/7—ENR 11/13.

†N. J., East Paterson—Pub. Bldgs. Admin., 7 and D Sts. S.W., Wash., D. C., fifty 1 and 2 story frame homes, aircraft plant, Project 28052X, to Andrew Christ & A. A. D Fontaine, 1140 E. Jersey Elizabet **$363,500.** Bids 10/20. CD —ENR 10/ under LB.

†N. J., Newark—Gus. Rei chy. & To Co., 63 Dickerson St., 1 story, pa bsmnt., 100 x 150 ft. machin nd tool mf bldg., for War Dpt., to James Mitchell, Inc 40 Clinton St. **$72,000.** Def Plant Cor will finance. CD 11/17—ENR 20.

★**N. Y., Suffern**—Bd. Edu Central Scho Dist., Suffern, high schoo Ramapo Twp to Fred J. Brotherton, Inc 00 Main S Hackensack, N. J. **$528,244** Bids 10/1 CD 10/16—ENR 10/23, under LB.

★**†O., Lacarne** — Con. Q.M. Erie Provin Grounds, Lacarne, 12 bldgs Erie Provin Ground, to Steinle-Wolfe, Inc 515 Crogha St., Freemont. **$503,189.** Bids 11/10, awarde 11/12. CD 11/5.

★**†O., Warren**—Copperweld Steel Co., S. S Williams, vice pres. in charge; Warren plant addn., to Uhl Constr. Co., 6001 Butle St., Pittsburgh, Pa. **$4,000,000.** Defense Plan Corp. will finance. CD 11/3—ENR 11/6.

†Okla., Fort Sill—Con. Q. M., 27 mobilization bldgs., utilities, etc., for Officers Candidate School, to J. W. Bateson, 23 and Tom Green Sts., Austin, **$397,480.** Bids 11/3 awarded 11/6. CD 10/29.

★**†Ore., Fairview**—Aluminum Co. of America, Gulf Bldg., Pittsburgh, Pa., fabricated aluminum plant, 60,000,000 lb. yearly capacity for War Dpt., to United Eng. & Fdry. Co. 1st Natl. Bldg., Pittsburgh, Pa., **$10,000,000** construction. Total $22,000,000. Defense Plant Corp. will finance. CD 11/17—ENR 11/20 under Troutdale, CA.

†Ore., Portland—Oregon Shipbuilding Corp., St. Johns Station, Portland, 2 story, L-shaped office addn., fitting storage bldg., for Maritime Comn., to Wegman & Son, Bd. Trade Bldg. Est. **$100,000.** Defense Plant Corp. will finance. Cash & Wolff, Ry. Exch. Bldg., archts. Awarded 11/14. CD 11/11—ENR 11/13.

★**†Ore., Troutdale**—Aluminum Co. of America, Gulf Bldg., Pittsburgh, Pa., foundation work and excav. for aluminum plant, for War Dpt., to Ross B. Hammond Co., Spalding Bldg., Portland. Est. **$12,000,000** incl. site and carbon plant. Awarded 11/14. Defense Plant Corp. will finance. CD 11/17—ENR 11/20, under CA.

★**†Tex., Austin** — Union Potash Co., subsidiary International Agricultural Corp., 61 Bway., New York, N. Y., design and construction dolomite ore plant, magnesium refining plant, utilities, 3½ mi. north of here, to Austin Co., 16112 Euclid Ave., Cleveland, O. **$11,747,000.** Defense Plant Corp. will finance. CD 11/18.

★**†Tex., Corpus Christi**—Yards & Docks, Navy Dpt., Wash., D. C., Naval Air Station and Naval Hospital additional facilities, NOY-4090, to Brown & Root, Inc., P. O. Box 866, Corpus Christi, W. S. Bellows Constr. Co., Bankers Mortgage Bldg., Houston, and Columbia Constr. Co., Oakland, Calif. **$5,955,550.** Additional to CD 5/9—ENR 5/15 under CA.

★**†Tex., Garland**—Guiberson Diesel Engine Co., 1000 Forest St., Dallas, structural steel for plant for mfg. radial diesel air-cooled engines for army tanks, to Austin Bros. 1813 Clarence St., Dallas, **$96,679*****electrical work, to Fischback & Moore, Inc. of Texas, c/o Electrical Bldg., Dallas, **$162,300*****fire protection sys. and all plumbing, to Harry Kahn Plumbing Co., 517 S. Ervay St., Dallas, **$83,500** ***air conditioning and steam heating plant, to Freyn Bros., Inc., 1028 N. Illinois St., Indianapolis, Ind., **$204,000.** Grand total $546,479. Defense Plant Corp. will finance. Awarded 11/17 Additional. CD 10/28—ENR 10/30 under CA.

†Tex., San Antonio—U. S. Eng., Federal Bldg., Galveston, 1 story photographic laboratory bldg., Kelly Field, to V. Prassel, Builders Exch., **$59,296.** Bids 11/10. CD 10/28—ENR 10/30.

†Tex., Wichita Falls—U. S. Eng., Citizens Bank Bldg., Denison, hospital recreation bldg., bakery, utilities, connections, etc., to Eckert-Fair Constr. Co., c/o Burt Bldg., Dallas, **$76,765.** CD 10/30—ENR 11/6.

★**†Washington** — Bureau Reclamation, Customhouse, Denver, Colo., furnishing four 230 kilovolt oil circuit breakers for Grand Coulee Power Plant, to General Electric Co., 1 River Rd., Schenectady, N. Y., **$206,920*****two 230 kilovolt oil circuit breakers and two 230 kilovolt lightning arresters, to Westinghouse Electric & Mfg. Co., Gas & Electric Bldg., Denver, Colo., **$158,004*****seventeen 230 kilovolt and eleven 115 kilovolt disconnecting switches, to Bowie Switch co., 19 and Tennessee Sts., San Francisco, Calif., **$148,000.** Grand total $512,924. CD 9/23—ENR 9/25.

★**†W. Va., Fairmont**—Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., D. S. Youngholm, vice pres., 2 story, 345 x 360 ft. glass plant, steel, brick, separate contracts. **$1,800,000.** Defense Plant Corp., will finance. Foster-Terchmann Co., 119 Federal St., N. S. Pittsburgh, Pa., consult engr. CD 11/10—ENR 11/13, under Bloomfield, N. J.

†W. Va., Fairmont—Westinghouse Electric & Mfg. Co., Pittsburgh, Pa., 1 story, 80x224 ft., brick, hollow tile backup, timber, special lamp mfg. plant, DPC 2, separate contracts. **$150,000.** Defense Plant Corp. will finance.

PUBLIC BLDGS. (Contracts Awarded, Cont'd.)

†**Wis., Sturgeon Bay**—Leatham Smith Coal & Shipbuilding Corp., 1 story, 113x165 ft., brick, steel fabrication shop, steel contract, to Vulcan Mfg. Co., Fond du Lac***foundation, to E. B. Olsen Constr. Co., Sturgeon Bay***steel erection, to J. Hennes Trucking Co., 1638 N. 4 St., Milwaukee. Defense Plant Corp. will finance. CD 9/4—ENR 9/11.

†**T. H., Pearl Harbor**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., oil fired boilers, etc., for Navy Yard, Contr.. 10598, to Combustion Eng. Co., Inc., 200 Madison Ave., New York, N. Y. **$329,846.**

COMMERCIAL BUILDINGS

PROPOSED WORK

★**Ariz., Litchfield Park**—Goodyear Aircraft Corp., 1144 E. Market St., 2nd unit housing. $4,500,000 to $5,400,000. FHA.

★**Calif., Stockton**—Private Interests, c/o E. W. Johnson & F. V. Mayo, archts., 931 N. El Dorado St., 1,035 housing units, wood frame. $5,000,000.

Colo., Colorado Springs—St. Mary's Catholic High School c/o architect, plans by J. K. Monroe, 2150 Curtis St., Denver, 2 story, 60 x 180 ft. and 70 x 90 ft., L-shaped school. $150,000.

Mass., Lowell—St. Joseph's Hospital, Merrimack St., completing plans by E. T. P. Graham, 171 Newbury St., Boston, 3 story, brick, steel hospital, Merrimack St. $150,000.

Mass., Springfield—Wesson Memorial Hospital, J. M. Dunlop, supt., High St., plans by Ebbets & Frid, 15 Lewis St., Hartford, Conn., 4 story, brick, steel hospital addn. $250,000.

N. J., Bergenfield—Erikson Constr. Co., c/o G. W. Swiller, archt., 535 Tremont Ave., New York, N. Y., 5 story, bsmnt., brick, teel apartment, Washington Ave. $200,000.

N. J., Bergenfield—E. Pippi, Spring Ave., plans by R. J. Cadien, 570 George Rd., Cliffside Park, thirty 2½ story, bsmnt., brick, frame homes, Spring Ave. $165,000.

★**N. J., Fair Lawn**—Federal Builders, Inc., Larch Ave., Teaneck, plans by P. S. Simon, 210 Main St., Hackensack, 100 two story, bsmnt., brick veneer, frame homes, Morlott Ave. $600,000.

★**N. J., Mann Farm**—Eastern Eng. Co., N. Carolina Ave., Atlantic City, residential development. Over $500,000.

N. J., Menlo Park—Menlo Park Homes, Inc., Lincoln Hy., 46 one story, bsmnt. frame homes, Wood Ave. $207,000.

N. Y., Dunkirk—Havens & Chapman, Olean, 25 frame dwellings, Newton site. $150,000.

★**N. Y., Forest Hills**—Anderson Apartments, Inc., 79 Madison Ave., New York, plans by M. Rothstein & Son, 391 Fulton St., Brooklyn, 6 story apartment, 67-12 Yellowstone Blvd. $540,000.

N. Y., Geneva—S. G. Lincoln, Tioga, Pa., 7 or more dwellings, High St. sect. $150,000.

N. Y., Olean—St. Francis Hospital, W. State St., hospital. $150,000.

★**O., Dayton**—Trustees, Miami Valley Hospital, 61 Magnolia St., F. L. Canby, pres., Dayton, 12 story, rein.-con., brick hospital, plain fdn., Apple St. $2,500,000.

Pa., Scranton—Bd. Directors University of Scranton, M. J. Martin, chn., gymnasium, 2 or more new educational bldg. units. $350,000.

Pa., Yorkshire (P. O. York)—T. Mills, York, 20 or 25 single frame dwellings, garages, roadways, etc. $150,000.

Tex., Freeport—Dow Magnesium Corp., Velasco, subsidiary Dow Chemical Co., Freeport, and Midland, Mich., frame homes, water, sewers, gas lines, etc., 4750 acre tract, Lake Jackson Plantation.

★**Tex., Freeport**—New River Development Co., Freeport, and c/o F. A. Hunter of Hunter Realty Co., 2808 Sunset Blvd., Houston, soon lets contract 208 dwellings for defense workers, $1,100,000; water and sewer lines, gas lines. $250,000.

Que., Charlesbourg — Reverend Brothers of Maristes, Iberville, soon lets contract novitiate imprvs. $150,000. J. C. Drouin, 104 St. John St., Quebec City, archt.

Que., St. Jacques L'Achigan (P. O. St. Jacques)—Reverend Sisters of Congregation of Ste. Anne, 7 18 Avenue, Lachine, plans by J. N. Beauchamp, 82 Notre Dame St. W., Montreal, convent. $150,000.

BIDS ASKED

Bids Asked December 1

Mass., Lowell—St. Joseph's Hospital, Merrimack St., 4 story, 65x80 ft., brick, steel hospital. $150,000. E. T. P. Graham, 171 Newbury St., Boston, archt. CD 11/21—ENR 11/27.

Bids Asked About January 1

Fla., Orlando—J. Rutland, Rutland's Men Store, 125 S. Orange Ave., 3 story, bsmnt., concrete store, Orange and Washington Aves. $200,000. Associated Architects, 6 W. Church St., archts.

Bids Asked

Conn., Stamford—L. M. Strauss, 8 Mildred Pkwy.. New Rochelle, N. Y., residences, 25 acre site, Hunting Ridge Rd.. Over $150,000. Preliminary bids. Leland Hubbell Lyon, 271 North Ave.. New Rochelle, N. Y., archt. CD 10/16—ENR **10/23.**

CONTRACTS AWARDED

★**Ariz., Litchfield Park**—Goodyear Aircraft Corp., 1144 E. Market St., Akron, O., 200 homes, to Del E. Webb Constr. Co., 1633 W. Jefferson St., Phoenix. **$900,000.** Gilmore & Echman, Security Bldg., Phoenix, archts.

★**Calif., Lomita**—Harbor Heights, Inc., c/o H. Burrell, atty., 417 S. Hill St., Los Angeles, 450 to 500 dwellings, Western Ave., near Palos Verdes Dr., South Lomita City. Owner builds. **$1,500,000.**

Calif., Redwood City — H. Sunberg, 407 Urbano Dr., San Francisco, 1 story, wood frame homes, Schwerin Tract, day labor. Ultimate cost over **$150,000.**

Calif., Richmond—Mechanics Bank, 9 St. and Macdonald Ave., rein.-con., steel bank addns., to E. J. Freethy, 271 10 St. **$150,000.**

Calif., San Mateo—Suburban Builders, Inc., 1182 Market St., San Francisco, 1 story, wood frame homes, day labor. Over **$150,000.** Williams & Wastell, 1736 Franklin St., Oakland, archts.

Conn., Hamden—Albert Swanson, 734 Russell St., residential development, Pine Rock Ave. Owner builds. **$150,000.** Schilling & Goldbecker, 405 Temple St., archt.

Conn., Norwalk — Country Homes of Norwalk, O. Soderstrom, 532 West Ave., 12 homes, Silvermine Falls and Devil's Garden, to H. Karlsen, Cedar Pl. Est. over **$150,000.** Cram & Parrette, 87 East Ave., archts.

★**D. C., Wash.**—Mayfair Gardens, c/o Albert I. Cassell, archt., 1903 14 St. N.W., 1794 units, 17 apartment bldgs., Anacostia Pkway, and Kenilworth Ave. N.E., to Paul T. Stone, Inc., 927 15 St. N.W. Est. **$8,000,000.**

Fla., Miami—South Florida Crippled Children's Hospital, Inc., c/o W. L. Philbrick, pres., crippled children's hospital, to John B. Orr, Inc., 25 NE 20 St. **$219,021.** T. Hunter Henderson, 1624 Alton Rd., Miami Beach, archt.

Ill., Chicago—Illinois Institute of Technology, 3300 S. Federal St., research laboratory, to R. C. Wieboldt Co., 1412 W. Washington Blvd. Est. **$50,000. (Correction**—cost of project) CD 10/29—ENR 11/6, under CA.

Ill., Roxana—C. C. Fischer, Wood River, 100 brick, concrete, frame, etc. houses, on 50x145 ft. lots to The Fischer Lumber Co., 400 St. Louis Rd., East Alton. Est. approx. **$375,000.**

La., Minden—O. M. Slack and E. M. Haik, Springhill, 80 residences. Owners build. **$240,000.**

Md., Baltimore—Ritz Enterprises, 1607 N. Washington St., 1 and 2 story, 70x200 ft., brick, steel motion picture theatre, Belair Rd. and Erdman Ave., to E. Eyring & Sons Co., 808 S. Conkling St. Est. **$200,000.** J. F. Eyring, 810 S. Conkling St., archt.

N. J., Dumont—Briarwood Homes, Inc., Grant Ave., thirty 2 story, bsmnt., brick veneer, frame homes, Grant Ave., separate contracts. **$150,000.**

N. J., East Orange—One Hundred Seventy-Six Prospect St. Corp., 15 Beverly Rd., West Orange, 3 story, bsmnt., brick, steel apartment, Prospect St., to One Hundred Seventy-Six Prospect Corp., 1172 Raymond Blvd., Newark, **$240,000.** E. Kleeman, 24 Branford Pl., Newark, archt.

★**N. J., Lodi**—Parkside Homes, Inc., 234-44 St., New York, N. Y., 150 one and one half story, bsmnt., 24x28 ft. brick, frame homes, day labor. **$750,000.** CD 10/31—ENR 11/6.

N. J., Paterson—Broadway Baptist Church, 537 Broadway, 2 story, bsmnt., brick, stone church addn., to J. H. Steele & Sons, 48 N. 2 St. **$150,000.** CD 10/7—ENR 10/9.

★**N. J., Raritan**—Raritan Defense Housing Corp., 2095 Bway., New York, N. Y., 150 one and one half story, bsmnt., 25x30 ft. frame homes, Old Post Road., separate contracts. **$675,000.** L. Kurtz, 15 W. 44 St., New York, N. Y., archt.

N. Y., New York—Bank for Savings, 280 4 Ave., 6 story, 90x150 ft. apartment, 303 W. 52 St., to Chain Bldg. Corp., 391 E. 149 St. Est. **$200,000.** CD 11/10—ENR 11/13.

N. Y., Tonawanda—Leeson Constr. Co., Delaware Ave., Buffalo, residences. Owner builds. **$310,000.**

Pa., Greenville—J. E. Martsolf, archt., 512 3 Ave., New Brighton, 3 story, bsmnt., 50x150 ft., brick, steel, tile womens dormitory, for Bd. Trustees Thiel College, Greenville, to Cook Anderson Co., 5 and Insurance Sts., Beaver. Est. **$150,000.** CD 7/7—ENR 7/10.

Pa., Mt. Lebanon (br. Pittsburgh)—St. Bernard Roman Catholic Congregation, Very Rev. T. H. Bryson, pastor, 311 Washington Rd., 1 story, 60x90x200 ft. church superstructure, stone on hollow tile backup, granite, limestone, separate contracts. $200,000. W. R. Perry, 203 Dormont Bank Bldg., Dormont, archt. CD 1/21—ENR 1/23.

Pa., Phila.—Anes Co., Inc., 1939 S. 5 St., residences. Owner builds. **$160,000.** I. W. Levin, Belmont Ave., archt.

Pa., Phila. — D. A. Dintenfass, Walnut and Juniper Sts., 58 residences. Owner builds. Over **$150,000.** C. H. Fries, 3701 N. Broad St., archt.

Tex., Grand Prairie—B. F. Tisinger & R. P. DeWitt, Praetorian Bldg., Dallas, 154 one story, frame houses, concrete fdns., to Sira, Reeves & Boedeker, 3903 Elm St., Dallas. Est. **$400,000.** CD 9/26—ENR 10/2.

Wis., Greenfield—J. D. Edwards, 921 S. 103 St., West Allis., 23 homes, $5,000 ea., and 17 homes $4,000 ea, Town View Subdivision. Owner builds. **$183,000.**

★**Que., Arvida**—Aluminum Co. of Canada, Ltd., 1155 Metcalfe St., Montreal, 222 houses, to J. L. E. Price & Co. Ltd., 680 Sherbrooke St. W., Montreal. **$950,000.**

Que., Levis—La Federation des Caisses Populaires, 63 Ste. Anne St., Quebec City, 3 story, bsmnt., 90x150 ft., stone, frame and slab office, rein.-con. fdn., to F. X. Lambert, 6 Abraham Hill, Quebec City. Est **$150,000.** CD 4/2—ENR 4/17.

INDUSTRIAL BUILDINGS

PROPOSED WORK

Calif., Alameda—SHOPS—General Eng. & Drydock Co., 1807 Clement Ave., welding shop. $40,000.

Calif., Bayshore City—PLANT—H. M. Pitt, Jr., 884 Chestnut St., San Francisco, completing plans chemical plant. $40,000.

Calif., Los Angeles—PLANT—Calif. Marine Curing & Packing Co., c/o Los Angeles Harbor Comn., enlarging plant, 708 Ways St., Terminal Island. $50,000-$100,000.

Calif., Oakland — PLANT — F. H. Dunne Paint Co., 1001 41 St., plant expansion. $40,000.

Calif., Pacific Grove—WAREHOUSE—Owner, c/o C. J. Ryland, archt., 136 Bonifacio Pl., Monterey, 2 story, 80x140 ft., rein.-con. warehouse. $40,000 or more.

Calif., Sacramento—FACTORY—Shaw Lumber Co., Klamath Falls, Ore., plans by C. F. Dean, Calif. State Life Bldg., board and batten box factory. Over $40,000.

Calif., San Francisco—WAREHOUSE—Dodd Warehouse Co., Montgomery and Vallejo Sts., warehouse addns. $40,000 or more.

Fla., Bartow—PLANT—International Agricultural Corp., Chemical Div., 3600 S. Morgan St., Chicago, Ill., Peace Valley Mine and Flotation Plant 6. $150,000. R. B. Fuller, Mulberry, engr.

Ill., Decatur — REFINERY — A. E. Steley Mfg. Co., E. K. Scheiter, vice pres., Decatur, corn and soybean oil refinery. $150,000.

Ind., Fort Wayne—PLANT—Tokheim Oil Tank & Pump Co., 1602 Wabash Ave., 1 story plant addn. $125,000. $175,000 or more incl. equip.

Ia., Sioux City—FACTORY—Wincharger Corp., E. 7 and Division Sts., R. F. Weinig, genl. mgr., factory addns., etc. $250,000.

Md., Baltimore—BUS TERMINAL—Pennsylvania Greyhound Lines, East 9 St. and Superior Ave., Cleveland, O., 1 and 2 story bus terminal. $200,000.

Md., Whiteford—PLANT—Staso Milling Co., C. McCann, supt., Whiteford, rebuilding plant, destroyed by fire. $40,000.

Mass., Springfield—FACTORY—Westinghouse Electric & Mfg. Co., Construction Dpt., Union Bank Bldg. L, Pittsburgh, Pa., 2 story, 82x284 ft. Factory L replacement, Page Blvd. $75,000

Mich., Detroit—FACTORY—American Asbestos Products Co., 5701 Davison Ave., plans by Lyndon & Smith, 13700 Woodward Ave., Highland Park, 1 story, brick, steel, rein.-con. factory, plain fdn. $45,000.

N. J., Hoboken—FACTORY—Autographic Register Co., 1000 Clinton Ave., plans by C. F. Dieffenbach, 84 Washington St., 1 story, 75x100 ft., brick, steel factory alterations and addn., Clinton Ave. $50,000.

N. J., Newark—FACTORY—American Platinum Co., 231 New Jersey Railroad Ave., brick, steel mfg. bldg., New Jersey Railroad Ave. Epple & Kahrs, 17 Washington St., archts.

N. J., Parlin — PLANT — Hercules Powder Co., Wilmington Trust Bldg., Wilmington, Del., enlargement plant facilities.

N. Y., Cobleskill—MILK PLANT—Schoharie County Co-operative Daries, Inc., Cobleskill, milk plant. $75,000.

N. Y., Fort Edward—FACTORY—General Electric Co., River Rd., Schenectady, factory.

O., Cleveland—FURNACE—Bishop & Babcock Mfg. Co., F. Mizer, pres., 4901 Hamilton Ave., 1 story, 30x170 ft. brick, steel furnace bldg. $40,000. W. S. Ferguson Co., 2362 Euclid Ave., engr.

Pa., Emlenton—PLANT—Quaker State Oil Refining Corp., Oil City, G. S. Hunter, supt. in charge, Emlenton, solvent dewaxing unit addn. to crude oil refinery. Over $50,000.

Pa., Foster Brook (Bradford P. O.)—PLANT—Kendall Refining Co., N. Kendall Ave., Bradford, O. Koch, pres., ethyl gasoline blending unit plant, etc. $45,000.

★**Pa., Williamsport**—PLANT—Hygrade Sylvania Corp., H. Ward Zimmer, genl. mgr., Emporium, plans by C. Wagner, 437 Germania St., and bids late in December 2 story, bsmnt., brick, steel radio products mfg. plant. $500,000. CD 11/14—ENR 11/20.

Tenn., Etowah — WAREHOUSE — Cantrell Bros. Lumber Co., E. Culpepper, mgr., rebuilding lumber warehouse. $40,000.

Tex., Del Rio—MILL—Eldorado Woolen Mills, Eldorado, woolen mill mfg. bldg. $100,000 or more.

Wash., Bremerton — BOTTLING PLANT — Coca-Cola Co., 310 North Ave., NW, Atlanta, Ga., masonry bottling plant, 12 St. $250,000.

Wis., Whitehall — PLANT — Land O'lakes Creameries, Inc., 2201 Kennedy St. NE., Minneapolis, Minn., bids soon, milk dehydration plant. $325,000. M. Buetow, 1931 University Ave., St. Paul, Minn. CD 11/5—ENR 1/13.

INDUSTRIAL BLDGS. (Proposed Work, Cont'd.)

Ont., London—PLANT—J. C. Klaehn, archt., 49 King St. E., Kitchener, soon lets contract refrigeration plant for Coleman Packing Co. Ltd., Dundas St. E. $50,000. CD 10/29—ENR 11/6.

★**Que., Montreal**—BOILER SHOP—T. Pringle & Son, Ltd., engr., 485 McGill St., soon lets contract 1 story, 200x270 ft., structural steel, brick, boiler shop, 2 story, 55x65 ft. brick, steel, concrete service bldg. for Canadian Vickers, Ltd., Maisonneuve, $1,000,000; bids soon boiler plant and allied equipment plant, $1,000,000.

BIDS ASKED

Calif., Van Nuys—FACTORY—Timm Aircraft Corp., 8055 Woodly Ave. (selected list bidders), brick, steel factory, 7731 Hayvenhurst Ave. $100,000. R. Howard Annin, 502 Architects Bldg., Los Angeles, archt. CD 11/21.

Mich., Wyandotte — WAREHOUSE, etc. — DuPont Co., Inc., Wyandotte, 1 and 2 story, brick, steel, concrete warehouse and factory, administration bldg., steel, rein.-con., plain fdns. $100,000.

O., Cleveland — FACTORY — C. B. Rowley, archt., 47x160 ft. and 21x120 ft. and 47x60 ft. brick, steel factory addns., all 1 story, for Cleveland Automatic Machine Co., 2269 Ashland Rd. $75,000. F. Erosky, 7829 Euclid Ave., engr.

O., Cleveland—FACTORY, etc.—Kling Realty Co., c/o C. F. Kling, in charge, 1276 W. 3 St., 1 story, brick, stel factory and warehouse. $40,000. Pla-Wood Products Co., E. M. Newman, pres., 16610 Waterloo Rd., lessee.

LOW BIDDERS

Md., Fairfield (sta. Baltimore)—SHOP—Maryland Drydock Co., Fairfield, Nov. 15, pipe and electric shop, etc., from Lacchi Constr. Co., 337 St. Paul St., Baltimore, **$150,000.** J. E. Greiner Co., 1201 St. Paul St., Baltimore, archts. H. Hanson, c/o owner, engr.

Pa., Phila.—FREIGHT TERMINAL—Motor Freight Express, Inc., 401 Spring Garden St., 55x245 ft. freight terminal, from John A. Robbins Co., 10 S. 18 St. Est. **$75,000.** J. Chertkoff, 207 W. Franklin St., Baltimore, Md., engr.

Que., Montreal—PLANT—Canadian Car & Fdry. Co., Ltd., 621 Craig St., plant, St. Patrick St., Pointe St. Charles, near here, from Foundation Co. of Canada, Ltd., 1538 Sherbrooke St. W., Montreal. **$65,000.** Spence, Mathias & Burge, 2063 Union Ave., archts.

CONTRACTS AWARDED

Calif., Los Banos — PLANT — E. C. Parke, archt., Rowell Bldg., Fresno, powdered milk plant, concrete, steel, for Los Banos Creamery Assn., Los Banos, to R. W. Brown Constr. Co., P. O. Box 338, Madera. **$46,650.** Est. $40,000. CD 11/17—ENR 11/20.

Calif., Redwood City — WAREHOUSE — H. Sanders, 1737 Bayshore St., warehouse, day labor. **$40,000.**

Calif., San Francisco — PLANT — General Brewing Corp., 2601 Newhall St., 1 story, wood frame bottling storage plant, to Cahill Bros., 206 Sansome St. **$40,650.**

Calif., San Francisco—WAREHOUSE—Lachman Bros., 16 and Mission Sts., rebuilding warehouse, furniture factory, etc., to Mills Constr. Co., 605 Market St. **$60,000.** CD 11/18.

Calif., Santa Monica—MACHINE SHOPS—Douglas Aircraft Co., Inc., 3000 Ocean Park Blvd., two 75x100 ft. machine shops, 50x150 ft. tooling shed, 60x100 ft. machine shop, steel frame, corrugated iron. Owner builds. **$128,000.**

Calif., Vallejo—WAREHOUSE—V. Bottari, 530 Tennessee St., warehouse, Sonoma Exten. Area, day labor. **$40,000.**

Conn., Hamden—WAREHOUSE, etc.—Jacob Ruppert Brewing Co., 85 Commerce St., New Haven, 1 story, 62 x 125 ft., brick, steel, concrete malt products warehouse and garage, Dixwell Ave., to Frank P. Sullivan Inc., 110 Tyler St., East Haven. Est. **$40,000.** E. J. Kahn, 2 Park Ave., New York, archt. Norton & Townsend, 405 Temple St., New Haven, assoc. archts.

Md., Baltimore—WAREHOUSE, etc. — McCarthy Hicks, Inc., 1112 Cathedral St., 2 story, 107x186 ft., brick, concrete warehouse and office, 2730 Loch Raven Rd., to Kirson Constr. Co., 339 St. Paul Pl. Est. **$60,000.** L. R. White, 10 W. Chase St., archt.

Md., Sparrows Point (br. Baltimore)—SERVICE—Bethlehem Steel Co., E. 3 St., Bethlehem, Pa., 2 story, 50 x 92 ft., service bldg. for maintenance dpt., 2 story, 50 x 90 ft., mechanical office bldg., 1 story, 23 x 34 ft. service bldg. for car repair, to Consolidated Eng. Co., 20 E. Franklin St., Baltimore. **$68,000.**

Mass., Lowell—BOTTLING PLANT—Lowell Coca Cola Co., Inc., 682 Aiken St., altering, remodeling brick, steel bottling plant, to R. E. Runels Constr. Co., 24 Merrimack St. Est. **$40,000.** E. C. Howard, Butler Co. Natl. Bldg., Butler, Pa., archt. CD 11/6.

Mass., Worcester—SHOP—American Steel & Wire Co., 94 Grove St., 1 story, brick machine shop addn., South Works, to M. J. Dyer & Co., 58 Front St. Est. **$40,000.** CD 10/31—ENR 11/6.

Mich., Detroit—FACTORY—American Metal Products Co., 5959 Linsdal Ave., 1 story, brick, steel, concrete factory addn., plain fdn., to Bryant & Detwiler Co., 2304 Penobscot Bldg. Est. **$55,000.** Giffels & Vallet, 1000 Marquette Bldg., engrs.

Mich., Detroit—FACTORY—LaSalle Tool & Gage Co., 2820 E. Seven Mile Rd., 1 story brick, steel, block, concrete factory, to Haberkorn-Barry Co., 2-135 General Motors Bldg. Est. **$40,000.** CD 1/28—ENR 1/30.

Mich., Ferndale—LABORATORY—Reichold Chemicals, Inc., 601 Woodward Heights Blvd., 1 story, brick, steel, rein.-con. office and laboratory, and chemical plant addn., to Cunningham-Rudy Co., 3087 West Grand Blvd., Detroit. Est. **$100,000.**

★**Mich., Muskegon**—FACTORY—Continental Motors Corp., 205-215 Market Ave., 1 story, 320x680 ft., brick, steel, rein.-con. airplane engine factory, plain fdn., to J. A. Utley Co., 723 E. 10 Mile Rd., Royal Oak. Est. approx. **$750,000.**

Minn., Duluth—COKE BINS, etc.—Interlake Iron Co., foot of 59 Ave. W., coke and ore bins, to Barnett & Record Co., 700 Flour Exch. Bldg., Minneapolis, **$90,000.**

Mo., North Kansas City—WAREHOUSE—North Kansas City Development Co., Railway Exch. Bldg., Kansas City, Mo., 1 story, warehouse, 14 and Swift Sts., to Hiram Elliott Constr. Co., Pioneer Trust Bldg., Kansas City, Mo. Over **$40,000.** Firestone Tire & Rubber Co., 1278 Main St., Akron, O., lessee. Awarded 11/10. CD 11/14—ENR 11/20.

Mo., St. Louis—FACTORY—Omar Tool & Machine Co., 1828 N. 17 St., 1 story, part bsmnt., 75x150 ft., brick, concrete factory, to H. Kissel's Sons, 4107 W. Florissant Ave. Est. **$40,000** or more, incl. equip. CD 10/23—ENR 10/30.

N. J., Carlstadt—WAREHOUSE—Carlton Terminal Corp., 485 Fort Lee Rd., Teaneck, 1 story, 90x193 ft., brick, steel grocery warehouse addn., Paterson Plank Rd., to C. A. Hunt Eng. Co., 485 Fort Lee Rd., Teaneck, Grand Union Co., 50 Church St., N. Y., lessee.

N. J., Dover—FACTORY—Swiss Knitting Co., E. Spruce St., 1 story, 76x100 ft., brick, steel knitting mill addn., to Lloyd Pruden, 58 New St., Dover. S. Ely, Jr., 12 W. Blackwell St., archt.

N. J., Englewood—GARAGE, etc.—Stillman & Hoag, Inc., 196 Engle St., 1 and 2 story, bsmnt., 75x100 ft., brick, steel garage and repair shop, Route 4, to F. & C. Haerter, 6507 Dewey Ave., West New York. **$50,000.** L. C. Licht, 101 W. Palisade Ave., archt.

N. J., Garfield—BOILER HOUSE—Heyden Chemical Corp., 290 River Rd., 1 story, 40 x 60 ft. brick, steel boiler house, 50 ft. high, to J. H. Steele & Sons, 48-2 St., Paterson. **$40,000.** CD 10/10—ENR 10/18.

★**N. J., Linden**—PLANT—Standard Oil of New Jersey, 500 N. Broad St., Elizabeth, catalytic cracking plant, Bayway Refinery, to Foster-Wheeler Corp., 165 Bway., New York City, N. Y. Est. $4,000,000.

N. J., Newark—STOCK HOUSE—Hoffman Beverage Co., 402 Grove St., 4 story, 38 x 62 ft., brick, steel stock house addn., Whitney St., to John W. Ferguson Co., 152 Market St., Paterson. **$120,000.** CD 11/14—ENR 11/20.

N. J., Perth Amboy—WAREHOUSE—Greenspan Bros. Co., 369 Herbett St., 1 story, brick, steel grocery warehouse, Dorsey St., to J. W. Ryan Constr. Co., 369 Lexington Ave., N. Y. **$125,000.** CD 10/20—ENR 10/23.

N. Y., Buffalo—PLANT—Farrell Birmingham Co. Inc., 344 Vulcan St., 50 x 200 ft. plant addn., to H. F. Stimm, Inc., Ellicott Sq. Bldg. Est. **$40,000.**

N. Y., Falconer—MILL—National Worsted Mills, P. O. Box 666, Jamestown, brick, steel, tile textile mill addn., to Warren Constr. Co., 335 Steele St., Jamestown. Est. **$40,000** with equip. Beck & Tinkham, Bailey Bldg., Jamestown, archts.

N. Y., Lackawanna — LABORATORY — Bethlehem Steel Co., E. 3 St., Bethlehem, Pa., 2 story, bsmnt., 46 x 53 ft., laboratory, to John W. Cowper Co., 775 Main St., Buffalo. **$50,000.**

N. C., Enka—PLANT—Enka Corp., twisting room exten., to Merchant Constr. Co., Asheville. **$41,830.** Bids 11/17.

O., Ashtabula—FACTORY—American Fork & Hoe Co., 1 story, brick, concrete, steel mfg. unit, to Ashtabula Industrial Corp., Ashtabula. Est. **$50,000.**

O., Jefferson—PLANT—General Electric Co., River Rd., Schenectady, N. Y., 1 story, 50x60 ft., brick, steel welding plant addn., to Warren Eng. Co., Warren. Est. **$40,000.** CD 11/14—ENR 11/20.

O., Lakewood—FACTORY, etc.—Lakewood Ready Flask, Inc., 14045 Madison Ave., Cleveland, 1 story, 45x140 ft., brick, steel factory and laboratory, to E. F. Kline, 15001 Bassett Rd., Bay Village, Cleveland. Est. **$40,000.** J. L. Rodrick, 1850 E. Superior Ave., Cleveland, archt.

Pa., Millvale (br. Pittsburgh)—HAMMER SHOP—E. T. Lippert Saw Co., E. B. W. Pfischner, pres., 708 Lincoln Ave., 1 story, 80x100 ft., brick, rein.-con. hammer shop, to F. Pschirer, Jr., 653 North Ave. Est. **$40,000.**

Pa., Nicetown (Sta. Phila.)—PRESS SHOP, etc.—Midvale Co., Nicetown, press shop and open hearth fdns., to Carter Paving Co., 50 St. and Lancaster Ave., Phila. Est. over **$40,000.**

Pa., Phila.—FACTORY—C. Lennig, Richmond and Brill Sts., 4 story, 55 x 120 ft. factory, to Frank V. Warren, Inc., Lewis Tower Bldg. Est. **$135,000.**

Pa., Titusville — PLANT — Titusville Forge Co., Titusville, general contract brick, tile, steel, concrete plant addn., to L. H. Ludwig, 20 W. Main St., Falconer, N. Y.***plumbing and heating, to Sans Co., 59 Winsor St., Jamestown, N. Y.***electrical work, to A. J. Benton, Titusville***iron and steel work, to J. Kitzinger, P. O. Box Jamestown, N. Y. Est. **$40,000.** Beck & Tinkham, Bailey Bldg., Jamestown, N. Y., archts.

R. I., Providence—RAILWAY EXPRESS—New York, New Haven & Hartford R. R. E. E. Oviatt, ch. engr., New Haven, Conn., 1 story, 98 x 125 x 265 ft. steel, concrete, railway express bldg. facilities, etc., to [illegible] Turgeon, 614 Turks Head Bldg., approx. $[illegible]000.

Tenn., Chattanooga—GRAIN ELEVATOR—Mountain City Mill Co., Inc., [illegible] King St., 500,000 bu. grain elevator, to [illegible] Hettelsater Constr. Co., Mutual Bldg., Kansas City, Mo., **$60,000.**

Tex., Beaumont — PLANT — [illegible] Paint Co., 1700 Madison St., brick, rein.-con. plant, to Walter King, San Jacinto Life Bldg. **$40,000.**

Tex., Galveston—WAREHOUSE, etc.—W. A. Kelso Co., Market St. and 30 St., warehouse and storage facilities. Owner builds. Approx. **$50,000.**

★**Tex., Katy**—PLANT, etc.—Humble Oil & Refining Co., Baytown, and Humble Bldg., Houston, and Associate Companies, gasoline or recycling plant, on 40 acre tract 4 mi. northwest of here, to Stearns-Roger Mfg. Co., 1720 California St., Denver, Colo., approx. **$2,600,000**; drilling, developing gas wells in Katy Fields for plant, force account and subcontracts, **$800,000.** Awarded 11/22. CD 4/30—ENR 5/8 under Industrial Bldgs. and Unclassified.

Va., Richmond—PLANT—Philip Morris & Co., Ltd., Inc., 10 S. 20 St., 4 story, brick plant, South Richmond, to Laburnum Constr. Corp., 918 E. Main St. **$300,000.** CD 3/6—ENR 3/13.

Wis., Appleton — FACTORY — Fox River Tractor Co., 1020 N. Rankin St., 1 story, 60 x 112 ft., concrete block factory addn., carpentry contract, to Attractive Homes Co., Appleton***masonry, concrete, to Chas. A. Green & Son, Inc., Appleton.

Wis., Sheboygan — WAREHOUSE — Sheboygan Iron & Metal Co., Mill Rd., 2 story, 50x80 ft., blocks, steel, brick warehouse addn., to A. Hummitzsch, 1435 Superior Ave., Satre-Senescall, 802 Michigan Ave., Milwaukee, archts.

Wis., Superior—WAREHOUSE—Central Co-op. Wholesale, 1901 Winter St., 2 story, 40x120 ft., rein.-con., brick warehouse addn., day labor. **$40,000.** R. C. Buck, Inc., 1223 Tower Ave., engr.

Wis., Theresa — FEED MILL — Theresa Farmers Co.-op., R 1, 2 story, ground floor, 34x60 ft., concrete feed mill and elevator, day labor. J. E. Hennen, 116 S. Main St., Fond du Lac, archt.

Ont., Hamilton—PLATE MILL — Dominion Foundries & Steel, Ltd., Depew St., 1 story, 90x242 ft. structural steel, armor plate mill addn., concrete fdn., to Frid Contg. Co. Ltd., Terminal Bldg. About **$150,000.** Prack & Prack, Pigott Bldg., engrs.

Ont., Leaside — PLANT — Cleveland Pneumatic Tool Co. of Canada, Ltd., 7 Millwood Ave., 1 story, 40x120 ft., brick, concrete plant addn., to T. MacClintock, 120 Floyd St., Toronto. Est. **$40,000.** H. D. Martin, 59 Hopedale Ave., Toronto, archt.

Ont., Owen Sound—PLANT—Russell Bros. Ltd., C. Russell, mgr., 2202 3 Ave. E., plant addn., to Woolrich & Clark, 1 Ave. E. About **$85,000.** CD 11/18.

Ont., St. Catherines—PLANT—Lord & Burnham Co. Ltd., Vine St., factory addn., Welland Ave. E., to Aiken & MacLachlan, Ltd., 9 Queen St. **$40,000.** CD 11/18—ENR 10/30.

Ont., Sudbury — PLANT — Canadian Pacific R.R., Union Sta., Toronto, T. B. Ballantyne, dist. engr., Ontario Dist., heating plant, to Carrington Constr. Co. Ltd., 11 Elm St. Est. **$40,000.**

Ont., Toronto—PLANT—Campbell Soup Co. Ltd., 1 St. and Birmingham Ave., plant addn., to Milne & Nicholls, Ltd., 57 Bloor St. W. About **$60,000.** Mathers & Holdenby, 96 Bloor St. W., archts.

Ont., Toronto—PLANT — Canadian General Electric Co. Ltd., 212 W. King St., 1 story, brick, concrete plant exten., Lansdowne Ave., to A. W. Robertson, Ltd., 57 Bloor St. W. Est. **$40,000.**

Ont., Toronto — ORDNANCE — John Inglis Co. Ltd., 14-24 Strachan Ave., 2 story, 82x320 ft., rein.-con. ordnance bldg. exten., to A. W. Robertson, Ltd., 57 Bloor St. W. About **$250,000.** Allward & Guinlock, 57 Bloor St. W., archts.

Ont., Toronto—PLANT—N. A. Armstrong, archt., 19 Merlinda St., plant, to Jackson-Lewis Co. Ltd., 320 Bay St., for Werner G. Smith, Ltd., 134 Boyce Ave. **$90,000** incl. equip. Bids 11/10. CD 11/11—ENR 11/20.

Ont., Welland—FACTORY—Canadian Foundries & Forgings, H. Tetlaw, mgr., Empire St., 1 story, 60x100 ft., brick, tile factory addn., to Piggott Constr. Co., Piggott Bldg., Hamilton. Est. **$45,000.** Awarded 11/21.

Ont., Windsor — PLANT — Long Mfg. Co. Ltd., 2744 Edna St., 60x174 ft., brick, structural steel exten., concrete fdn., to Allan Constr. Co. Ltd., 44 Wyandotte St. E. Est. **$60,000.** CD 11/17—ENR 11/20.

Que., Dorval—PLANT—Construction Equipment Co. Ltd., 180 Vallee St., Montreal, machine shop, boiler house, storage room addn., new septic tank, to Foundation Co. of Canada, Ltd., 1538 Sherbrooke St. W., Montreal. Est. **$50,000.** CD 10/3—ENR 10/9.

Que., Kenogami—PLANT—Price Bros. Co. Ltd., 65 Ste. Anne St., Quebec City, plant addn., to Foundation Co. of Canada, Ltd., 1538 Sherbrooke St. W., Montreal. Est. **$150,000.**